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ORIGINAL ARTICLES.

LACERATIONS OF THE FEMALE SEXUAL ORGANS CONSEQUENT UPON PARTURITION; THEIR CAUSES AND THEIR PREVENTION.[1]

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MY object in appearing before you, as stated in the programme, is to read a paper on lacerations of the female sexual organs consequent upon parturition. It may seem odd, if not impertinent, to those of you who do not know me intimately, that I should venture to discourse upon such a subject so essentially in the hands of specialists; but they will perhaps pardon me if I tell them that, although I have all my professional life, now extending over a period of fifty-six years, been a general practitioner, yet during the first third of a century of that life I was more or less extensively engaged in obstetric practice; while during the last third I have had more or less to do almost daily with the treatment of female diseases requiring the use of the speculum and operative interference of various kinds. I have performed ovariotomy, and on numerous occasions sutured the perineum and the vesico-vaginal septum with a degree of success, if not highly flattering, at all events respectable. Within a short time after my entrance into the profession, I translated Hatin's *Manual of Obstetrics*, a small volume which had an extensive circulation in its new dress; in 1839 I contributed several pages in my work on *Pathological Anatomy* on "Uterine Moles," founded upon original observations and dissections; and in 1854 I unearthed, after much labor and research, Ephraim McDowell's claims to the fathership of ovariotomy, up to that period generally ascribed to other sources. Moreover, as a writer on systematic surgery, compelled to keep abreast with the knowledge of the times, I have embodied in my treatise an elaborate chapter on the diseases and injuries incident to the genital organs of the female sex, reflecting, at least in some degree, an outline of the existing state of the science. I make these remarks, in anticipation, as a justification for bringing before the Section a subject which, in some of its relations, has been so often and so elaborately discussed by many of the ablest men all over the civilized world. I might have taken my budget before the Surgical Section, but believing that fairer justice would be meted out to it here, I have given it this direction. When I shall have finished my task I trust you may not be able to say with Appeles, "Ne sutor ultra crepidam;" but rather incline to Tacitus, "Nihil scriptum miracuti causa."

It is astonishing how much has been written on the treatment of these lesions, and how little has been said upon their causes and prevention. Operations almost innumerable have been devised for their relief; volumes have been written upon the subject, and everywhere, in town and city, the gynecologist is ready to offer his services in sewing up lacerations of the genital organs of maltreated and unfortunate women. Seldom do we hear the voice of any of them raised in behalf of preventive measures, and then only in an indirect or roundabout manner. I am here this evening, not to wrestle with shadows or imaginary demons, but with stern realities, and to speak the truth, the whole truth, and nothing but the truth, as I understand it. The time has arrived when this matter should be met in a bold and fearless manner.

The lacerations of which I desire to speak are those which affect—(1) the perineum; (2) the vesico-vaginal septum; (3) the recto-vaginal septum; (4) the neck of the womb; and (5) the urethra, or mouth of the urethra and of the vagina. A few remarks under each of these heads will suffice for my purpose.

Laceration of the perineum is of frequent occurrence, and cannot always be avoided even under the most judicious management. In primiparæ, the fourchette is almost invariably ruptured, especially when the tissues are unusually rigid, and the protruding structures are very large, or very rapid in their descent, or where the perineum is not properly supported. Fortunately, such an occurrence is of little moment, as it respects the patient's welfare, either present or prospective. But it is very different when the rupture is extensive, involving a large portion of the perineum, or perhaps extending—as not infrequently happens—through the sphincter muscles of the anus and the lower extremity of the vagina. Then such an accident constitutes a great evil, and demands more or less skill for its cure.

Lacerations of the vesico-vaginal septum are among the saddest of calamities, entailing, if not successfully remedied, endless suffering upon the poor patient. I know of nothing more calculated to excite our sympathy, or to enlist the noblest qualities of our nature. In the worst forms of such accidents, in which science and skill offer no relief, as occasionally happens even in these enlightened days, death would be a welcome visitor. Equally distressing is a recto vaginal fistule, or a rent with loss of substance in the urethra.

Lacerations of the neck of the uterus, even when comparatively slight, often entail great suffering, local and constitutional; the former manifesting themselves in various kinds of pains and discharges, and the latter in almost every form of nervous dis-

[1] Read before the Section on Obstetrics and Diseases of Women, American Medical Association, May 8, 1884.

orders of which it is possible to form any conception, together with more or less derangement of the digestive and assimilative organs. Of the frequency of these accidents, an idea may be formed when I state, what has long been known to most of you, that one of our most distinguished native writers on gynecology has expressed his conviction that rupture of the neck of the uterus, in greater or less degree, is almost inseparable from a first labor. Whether Dr. Emmet is correct in this conclusion, is a question which remains to be determined. If it be true, it would inevitably go to prove that God has made woman much less perfect than the world has given him credit for. As childbirth is one of the special prerogatives of woman, designed to perpetuate the race, there is something peculiarly distressing in such an idea. Looking at the matter from a practical standpoint, one would naturally conclude that the Author of our being had constructed the womb with special care to protect the organ, at least as a rule, against the possibility of a contingency fraught with such sad consequences. If we assume the correctness of Dr. Emmet's statement, we may well wonder, without irreverence, why Almighty God did not create simultaneously with woman a competent gynecologist, ready to meet this inevitable evil, for such unquestionably it must be whenever it occurs. If this evil is the outgrowth of civilization, then the sooner we get rid of this civilization the better will it be for our poor wives and daughters, considered as procreating beings.

It was a happy circumstance when, in 1851, Sir James Y. Simpson first called attention to this important subject. It was like the discovery of a new world in human progress. In the *Proceedings of the Edinburgh Obstetrical Society*, for January of that year, he proclaims the important truth, until then unknown, or only guessed at, that fissuring and laceration of the cervix are not, as had been generally believed, rare lesions during labor, but, on the contrary, very common occurrences, especially in primiparæ, and he supports his views, not only by what he saw with the aid of the speculum, but by an appeal to autopsies in which rents and fissures were detected in the mouth and neck of the uterus after natural labor. The facts thus pointed out by the great Scotch professor were afterwards—namely, in 1869, and again in 1874—brought more fully before the profession by Dr. Emmet, in two important papers published in the *American Journal of Obstetrics*, where they soon attracted general attention. To these two distinguished men, then, are we mainly indebted for the knowledge which we now possess upon this important subject; knowledge of priceless value to suffering woman, and of the greatest consequence to the obstetric practitioner.

If we inquire into the exciting *causes* of these accidents, it will be found that they vary with the situation and structure of the parts involved in them. The great factor in laceration of the perineum is parturition, either alone or in conjunction with the means employed to effect it. When this wall to the outlet of the pelvis is very rigid, and the action of the uterus unusually vigorous, forcing down the head of the child with great vehemence, it is easy to conceive not only of the possibility, but of the great likelihood of such an accident, especially in the absence of proper support. In such a condition the perineum is very much, to use a figurative expression, in the position of the door of a room, with a big, burly fellow on the inside, knocking for egress. To carry out the simile, he does not in every case batter down the whole of the opposing obstacle, but only a portion of it, representing a comparatively slight laceration, as where the fissure is limited to the fourchette, or to the anterior portion of the perineum, while, when the resistance is extreme, the entire wall is torn, the lesion extending, through the sphincter muscles, into the rectum; in other words, the entire door is battered down, and the vagina and bowel are laid completely open.

Of the various kinds of lacerations of the vagina, or of the vagina and the uterus, constituting what are known as fistules of the bladder, or of the rectum, those dire calamities which form so prolific a field for operative interference, the most common factor unquestionably is either prolonged or very severe pressure. "This is," says Thomas, in his able work, "beyond all doubt, the most prolific source of the accident, though it may also attend a rapid labor in which the vagina has been pressed against some point of the pelvis with great violence." The active agent of this pressure is generally the child's head, especially when it is disproportionately large or wedged in behind the pubic symphysis, unduly compressing the vesico-vaginal septum, followed by destructive inflammation and sloughing. The accident is generally the result of protracted pressure, as when the child's head has been wedged in in this position for many hours, neither, perhaps, receding nor advancing; or it may be caused in a very short time, as when the pressure is unusually concentrated and severe. If the pains are very violent, the pressure of the presenting parts may be so great as to end in actual rupture of the vesico-vaginal septum, but, as a rule, the opening is the direct result of concentrated pressure, eventuating in inflammation and sloughing, precisely as in an ordinary bedsore. Vesico-vaginal fistules are not infrequently produced by the pressure of the child's head upon a distended bladder. How far the maladroit use of the forceps, vectis, or other instruments may be capable of producing such lesions will form the subject of future inquiry.

The principal causes of lacerations of the cervix are precipitate labor, labor attended with rigidity of the mouth of the womb, and instrumental labor. Lacerations are not uncommon in breech cases, in which delivery is obliged to be expedited on account of the retained head before the cervix is properly dilated. These are unquestionably the most frequent and efficient factors in the production of accidents in this situation. If to these we add the presence of cicatricial tissue in the cervix, malpresentations, and section of the cervix, as occasionally practised by ignorant obstetricians, we have a complete list of all the causes, active and

predisposing, of rupture of the uterus during normal parturition. A premature discharge of the amniotic fluid acts mainly, I presume, as a means of retarding labor than as a cause of laceration of the cervix. I must not omit to allude here to a statement of Dr. Emmet that laceration of the cervix is of frequent, if not common, occurrence in cases of criminal abortion. I do not know that this fact has been noticed or verified by other observers, but of its truth I entertain no doubt. In his tables, Dr. Emmet gives ten cases of this kind, and he declares that he has met with this accident in every instance where the woman admitted the fact of exposure to malpractice.

Having thus briefly discussed the situation and causes of the accidents in question, let us, in the next place, inquire into the best means of preventing them, the chief object which I have had in view in bringing this matter before you to-day. There is more honor in one ounce of preventive midwifery than in one pound of curative gynecology, the outgrowth of ignorant or meddlesome obstetric practice. That many of these occurrences are inevitable without any just blame attaching to the professional attendant is well known to every practitioner of the least experience, but that they may, as a rule, be prevented by the exercise of proper care and skill will, I think, be readily admitted; at all events it is true.

The great remedy, as laid down in the books, for rigidity of the perineum is manual support during the descent of the child's head, or whatever else the presenting parts may be; this, as a rule, is quite sufficient; but not so when the resistance is very great. In this event, the accoucheur is expected to make use of the hot bath and of hot fomentations, to anoint the parts with oil, and even, in extreme cases, to make slight incisions on each side of the middle line. Nothing is said in these injunctions of the abstraction of blood as a means of relaxing this tense, resisting wall which so obstinately stands in the way of the completion of the parturient process. What are the active agents of this resistance? Unquestionably the muscles of the perineum, the sphincters of the vagina and anus, the transverse muscles, and the elevator muscles of the anus. The skin and connective tissue offer no obstacle. The whole difficulty resides in the muscles, and its amount is precisely in proportion to their development, great in strong, young, robust women, and comparatively slight in those of an opposite character. If this statement be correct, and no one can doubt it, it follows, as a necessary corollary, that the obstacle is most readily overcome by some measure that will relax the perineal muscles. Hot water, oil, and medicated unguents will not do this, and no sane man would wait for the tardy and uncertain effects of local bleeding. A far better plan is to take blood at once from the arm from a free orifice in one of the large veins, the patient sitting up in bed during the operation, so as to produce the most rapid and decided impression at the least expense of the system. If there be anything better than this, anything more likely to answer the purpose, I am not aware of it. The loss of ten, twelve, sixteen, or even twenty ounces of blood can do no harm in such a condition of things. A few days under proper treatment always suffice to replace it, while, as a rule, it promotes rather than retards recovery, by rendering the woman less liable to puerperal fever, peritonitis, and pelvic cellulitis.

In regard to lacerations of the vesico-vaginal septum, much may be done in the way of prevention, and so also in regard to rents into the rectum. It is self-evident that anything that lessens the size of the canal through which the child is to pass, or that seriously interferes with the descent of the child's head, must act as an impediment to delivery. All obstetric teachers are aware of this fact, and hence they take special pains to instruct the young practitioner to see that the rectum is well emptied during the later stages of pregnancy, or, at all events, on the approach of labor, and that the urine is evacuated from time to time as the labor progresses. These precautions are unquestionably most important safeguards, and, if duly attended to, are rarely followed by serious injury. If, on the contrary, they are neglected, as I fear is not infrequently the case, especially among the lower classes of women, it is easy to conceive that the consequences must be of the most direful nature, especially if, superadded to these obstacles, there is an impacted condition of the child's head along with violent uterine contraction. Under such circumstances it is difficult to conceive how the poor patient could escape injury in some form or other. The machinery must break down somewhere. A few hours may suffice to do the mischief. The only remedy, of course, is the forceps or crotchet, and the former cannot be applied too soon. The bladder must be liberated, or a vesico-vaginal opening, if not something worse, will be the inevitable result.

The proper remedy for the relief of the stationary head, whether impacted or simply arrested by the inertia of the womb, is—provided the cervix is sufficiently dilated, or dilatable—the forceps, that "noble instrument," as it was called by Chapman, who, in 1733, published the first account of it, upwards of one hundred years after its invention by Paul Chamberlen, of England. I shall not speak of the numerous modifications which this valuable instrument has experienced in the hands of the obstetricians, or detain you by asking whether the long instrument is preferable to the short, or the short to the long. In the hands of the judicious practitioner, each has a distinct and separate value; but it will be pertinent to the object of this paper to inquire into the reasons which have led to the great changes which have taken place in regard to the frequency of its use.

Beginning with the great Baudelocque, the most illustrious accoucheur of the last century, we find that he applied the forceps once in 561 cases; Clark in 728; Collins in 617; Lachapelle in 293; Baer in 274; Boivin in 214; Davies in 53; Naègle in 31; Kluge in 16; Carus in 14, and Siebold in 7.[1] Smellie, who flourished in the middle of the last century, and who was the most famous accoucheur

[1] Robert Lee's Table, in Lectures on Midwifery.

in his day in Great Britain, applied the forceps once in 125 labors; and Merriman, another distinguished English obstetrician, once in 93.

From the late Dr. Churchill, of Dublin, we learn that in Great Britain, until recently, the forceps were employed once in 249 cases; in France, in 140: and in Germany, in 106.

In this country, the present fashion is to apply the forceps very frequently, both in private and in hospital practice. Some of my friends inform me that some accoucheurs resort to the instrument as often as once in 4 labors; others in 6, 8, or 10. Whether the forceps are employed as often in Great Britain and on the Continent of Europe, I am unable to say; but the difference, if any, must be very trifling.

Dr. William P. Dewees, who was the great Philadelphia accoucheur in his day, and who delivered upwards of ten thousand women, writing in 1843, holds the following language in regard to the use of the forceps: "However strongly I may be impressed with the utility of the forceps, I should not feel myself warranted to use them as often as they appear to be in Great Britain and on the Continent of Europe. The frequency with which they have been employed in some instances is really alarming, and, I had like to have said, must have been too often unnecessary. In my own proper practice, I have not employed them oftener than once in three hundred and fifty cases, though I have been under the necessity of using them very frequently in the practice of others."[1]

Notwithstanding that Dewees so seldom employed the forceps in his own cases, we nowhere find that he had any serious lacerations of the genital organs. In the tenth edition of his *Treatise on the Diseases of Females*, published in 1854, "with the author's latest improvements and corrections," not one word is said upon the subject, not even upon rupture of the perineum. Now, if such accidents had occurred under his observation he could hardly have failed at least to mention the fact. If I am told that Dewees did not use the speculum, and could, therefore, not detect them, I reply that he had eyes to see, and fingers to feel. He certainly could tell what the nature of the case was when urine or fecal matter flowed off by the vagina. Philadelphia's great accoucheur, Dr. Ellwood Wilson, has superintended, as he informs me, 10,600 cases of labor at the Lying-in Hospital in that city, without the occurrence of a solitary instance of vesico-vaginal, or recto-vaginal fistule. He, like others engaged in large private practice, has witnessed numerous atrocities in consultations. The testimony of my late colleague, Professor Ellerslie Wallace, is precisely of the same import.

In a discussion of the admirable paper of Dr. Emmet, "On the Necessity for Early Delivery, as demonstrated by the Analysis of 161 Cases of Vesico-vaginal Fistula," read before the American Gynecological Society, in 1878, Dr. D. Humphrey Storer declared that, in an experience of several thousand cases of midwifery, he had witnessed only two cases of vesico-vaginal fistule, adding that there was no man in Boston who applied the forceps less seldom than he. He approved of the employment of the forceps in certain conditions of labor, "but the idea," he remarks, "that the forceps is an instrument which must be almost constantly used is, I think, a dangerous one." This sentiment was elicited by the statement of Dr. Emmet that the great factor in the production of vesico-vaginal fistule is impaction and long detention of the child's head, aided by distention of the bladder, and the assertion that instrumental delivery has rarely, if ever, any agency in the production of this sad occurrence.

Dr. H. P. C. Wilson, of Baltimore, on the same occasion, asserted that he had made it a rule for many years, when called to a case of labor, to carry with him a bottle of chloroform and a pair of forceps, adding that he had frequently used the forceps when he was certain that the woman would be delivered safely by nature, simply to shorten the labor and relieve suffering. Dr. John L. Atlee, in referring to Dr. Wilson, said, "the older I grow the more apt I am to employ the forceps." In opposition to these sentiments, I take leave to cite the views of America's latest writer on obstetric medicine, Dr. Lusk, as expressed in his admirable treatise, *The Science and Art of Midwifery*, the second edition of which was issued only a few months ago. "I can only say," declares this excellent author, "that, with increasing experience, my own practice has grown more and more conservative, and my own belief is that true wisdom requires us to abstain from even trivial operations, so long as nature is able to do her work without our assistance."

Is it not a fact, I would ask, that the forceps are often used merely as a means rather to save the time of the accoucheur, than as a means to prevent the suffering of the poor woman; to enable him to meet another engagement, to visit the theatre, or to attend a dinner or an evening entertainment? Passing along the streets not long ago, said Dr. Goodell to me a few months since, my eye lighted upon a gentleman walking rapidly on the opposite side, who, the moment he recognized me, shook his green bag at me, exclaiming, "reed birds for supper," and hurried on.

I take leave here to quote what I deem eminently pertinent to this part of my paper, a passage from a communication that appeared in the New York *Medical Record*, March 8th, of the present year, from the pen of Dr. A. E. Dugas, of Augusta, Georgia: "When I graduated in 1875, an old sage in the profession advised me as follows: 'My boy,' said he, 'I am an old man; I have practised over fifty years, and, as you are aware, have been very successful. In regard to your labor cases, I would give you the following advice: First, as you intend practising in the city, make it a habit of leaving your forceps at your office, for, if you ever require them, you will always have ample time to send for them, and your not having them with you may save some women much trouble. Second, do not examine your patient much or often; see that

[1] Midwifery, p. 292.

things are right, and then let nature manage the case.'"

The "old man" here alluded to is no less a personage than the great and venerable Dr. Louis Alexander Dugas, a man of vast experience as a practical surgeon and accoucheur, and emphatically one of the sages of our profession. How wise such advice is in contrast with the accursed practice of the day, when every obstetrical fledgling thinks himself competent to use the forceps, and is anxious to get to his "reed-bird supper," I leave you to judge.

If all accoucheurs were well educated and well versed in the use of the forceps, there might be some justification for the frequency with which they are applied at the present day. There might even be some justification in hitching them on the child's head, when nature is fully equal to her task, to get home in time to a good supper; but to use them on the slightest pretence, as is so often done now-a-days by every sciolist, hardly out of his swaddling clothes, is, if you will allow me to say it, simply damnable. Surely our obstetric teachers have a great deal to answer for in sending forth every year armies of incompetent young accoucheurs. Surely they commit a grave sin when they teach the frequent application of this "noble instrument," employed far too seldom in former times, as it is certainly employed too often in ours. In conversing recently upon this subject with a distinguished obstetric teacher, now retired, he said to me, "I always enjoined it upon my pupils, after pointing out to them the uses and abuses of the forceps, to carry the instrument with them to every case of labor, adding that it was just as important as it is for the mariner to carry his compass with him to sea." Without wishing to disparage the judicious use of the forceps, which I have no right to do, and which God forbid I should do, I think a careful consideration of the case justifies me in endorsing the opinion of Baudelocque, uttered more than a century ago, that the forceps, as generally used, have done more harm than good, and in this view I am glad to be able to say that I am sustained by many eminent, able, and experienced obstetricians and gynecologists of the present day.

That many accidents happen for the want of a proper use of the forceps, or of their timely application, is proved by the numerous cases of vesico-vaginal and other fistules, and by the still not infrequent sacrifice of the child, if not also of the mother; of the former by fatal compression or craniotomy, and of the latter by exhaustion, heart clot, pulmonary obstruction, or other causes. It would be difficult to find in all the records of obstetric medicine a case which more sadly and forcibly illustrates the baneful effects of the want of the proper use of the forceps than that of the Princess Charlotte, whose death, in 1817, threw the whole British nation into mourning. The amniotic liquor had been discharged early in the labor, and although the head had long been in the lower strait, the delivery, which took place at the end of fifty-two hours, was entrusted entirely to nature's efforts. No wonder that the child was still-born, and that the poor woman, exhausted by her protracted labor, expired soon after her delivery. No wonder that her principal accoucheur, Sir Richard Croft, committed suicide as the best remedy for his sad blunder and consequent mortification!

I come, in the third place, to inquire briefly into the proper preventive treatment of lacerations of the cervix. We have said that these injuries are most common, by far, in primiparæ, especially when pregnancy occurs in women somewhat advanced in life. Spiegelberg found that the average duration of labor in five hundred and six primiparæ was seventeen hours, and twelve hours for multiparæ. After the thirtieth year, the duration is materially increased, amounting, according to Hecker, in primiparæ, to twenty-one hours, and, according to Ahlfeld, to twenty-seven hours.[1] If we ask what is the cause of this difference in the duration of labor in primiparæ and multiparæ, we shall find a ready answer in the difference in the pliancy and softness of the genital organs, and in the fact that the way is paved by the previous parturition. In primiparæ, especially in elderly ones, the genital organs are hard, firm, inelastic, unyielding; in multiparæ, on the contrary, they are comparatively soft and dilatable, yielding readily before the advancing head. In the one case the labor is comparatively easy, rapid, and safe, both to mother and child; in the other, painful, protracted, and fraught with danger; the uterus and perineum, not to mention the vaginal septa, are liable to be torn, and the child often perishes from injury inflicted upon its head and lungs. If, in such a labor, delivery be attempted with the forceps before the parts are properly relaxed, or if attempts be made to dilate the parts forcibly with the fingers, it is easy to perceive that rupture, of a more or less serious nature, must inevitably happen.

Since the attention of accoucheurs was first directed to the frightful frequency of lacerations of the cervix in primiparæ by Simpson and Emmet, the subject has assumed a degree of importance previously undreamed of, and the question naturally arises here: How are these injuries to be avoided? How are we to abridge the duration of labor in primiparæ, and to place them on the same level with the multiparæ? There is but one way to accomplish the object, and that is by the employment of relaxing agents. It is a well-known fact that labor is more easy in hot than in cold climates, a circumstance which would naturally lead us to employ hot applications, as the hot bath, hot fomentations, and hot injections. I will not deny that such agents might occasionally do good, but what sense is there in parboiling a woman when we have at hand other agents far more speedy and more efficacious in their action. I do not allude here to chloral, ether, chloroform, and tartar emetic, the last of which, from its tendency to produce vomiting, could hardly in any case be a safe remedy, while the former, with some advantages, would seldom prove reliable to bring about the desired result. The great remedy which I have in my mind's eye is venesection, car-

[1] Lusk, Science and Art of Midwifery, p. 134. Second edition, 1884.

ried to a reasonable but sufficient extent to relax the system and through the system the genital organs. I do not introduce this as a new remedy, for general bleeding to overcome rigidity of the uterus and perineum was practised long ago, and is still practised by many of our older physicians under such circumstances; but I desire to recall attention to it as the most prompt, powerful, and efficacious of all the agents that the accoucheur can press into his service for the attainment of this end. I am not abashed if I am told, at the very threshold of this announcement, that venesection is an obsolete art, that none but old fogies would think of employing it, and that the blood during pregnancy undergoes such great changes as to render the loss of it, except in puerperal convulsions, an improper expedient during labor with a view of expediting it.

There was a time when this agent was very generally, I had almost said, universally used, even in my early days, in great rigidity of the sexual organs; fortunately, that day has gone by. But if the lancet was used too much then, it is certain, at least to my mind, that it is not used enough now. We are too apt, as a profession, to be influenced by prejudice, especially when it is backed by great authority. When the wether jumps the rest of the flock are sure to follow. I recollect when it was customary to bleed pregnant women for the relief of headache, dizziness, or vertigo, pulmonary congestion from aortic obstruction, and pelvic and sacro-lumbar pains. The "false pains," as they are termed, often so harassing and worrying as to be a source of real suffering, may generally be promptly relieved by the abstraction of eight, ten, or twelve ounces of blood; and who would not bleed, bleed freely, when a plethoric pregnant woman is threatened with convulsions? To withhold the lancet in such a condition would simply be criminal, and yet some obstetricians, even of world-wide renown, would content themselves with the exhibition, in such an event, of chloroform, of chloral hydrate, or of both articles combined.

If I be told that a pregnant woman should not be bled because, while in this condition, she experiences a marked decrease of the red corpuscles of the blood, I answer that this would be simply begging the question. If this were the only change which this fluid undergoes to meet the physiological necessities of the system during utero-gestation, there might be some reason for such a conclusion. But this is not the fact, for, while there is a marked diminution of red globules, there is also a marked increase of fibrin and albumen, assimilating the mass of this fluid to the condition in which it is found to be in inflammation. Instead, therefore, of using these changes as an argument against the use of the lancet, they afford the strongest possible evidence in favor of it whenever a powerful relaxant is required to facilitate parturition. May plethora not be caused by the presence in the blood of an undue proportion of its fibroid, albuminoid, and aqueous constituents? Blood is formed rapidly in pregnancy, to meet the demands of the system, and it is not at all necessary to perform experiments on bitches to prove what daily passes under our observation in the human subject. The great strength, the exuberant health, the florid cheek, and the genial warmth diffused throughout the entire system, sufficiently attest the presence of an active circulation, with an abundance of red globules, although they may be relatively fewer than in the non-pregnant state. No rational accoucheur would bleed an anæmic woman, or a woman laboring under cardiac disease, aortic insufficiency, chronic malarial fever, or any wasting malady whatever. Such affections point out their own remedies—supporting, and not depleting measures.

There is an idea, almost universally prevalent, that the people of the present day do not bear loss of blood as well as they did forty, or even twenty, years ago, an opinion which has exerted such an influence upon medical men, as well as upon the public at large, that venesection has become an obsolete operation, or an operation which is, at most, limited to a few old fogies—as they are sarcastically styled—ignorant of the benign progress of the healing art, and of the tolerance of the system. Whether this opinion be true or erroneous, this is not the time nor the place to inquire; suffice it to say that my solemn conviction is that the neglect into which this operation has fallen, not only in midwifery, but in general practice, is the cause, annually, of the loss of thousands upon thousands of human lives that might otherwise be saved.

If I were asked under what circumstances a pregnant woman, in sound health, without any complications, ought to be bled, I should answer, first, when she is threatened with abortion, miscarriage, or convulsions; secondly, when there is a rigid os, obstinately refusing to yield after the labor has been in progress for six, ten, or twelve hours; thirdly, as a rule, in tardy labor in primiparæ, especially after the age of thirty; fourthly, where there is, so to speak, rigidity of the general system, including, of course, the sexual organs; fifthly, when there is a decidedly feverish condition of the systen, associated with severe headache, great heat and dryness of the genital organs, a rigid os, or os and perineum, and inefficient, teasing labor-pains; and, lastly, in torpor of the uterus from the effects of inflammation, gout, or rheumatism, interfering with or retarding delivery. In all, or, certainly, in most of these conditions, I should follow up the effects of the bleeding with an anæsthetic, or a hypodermatic injection of morphia. I solemnly believe that, if these rules were properly observed, the process of parturition would be greatly facilitated, the pains of labor materially abridged, and the risks of lacerations, which now stand as such a blot upon obstetric practice, would be reduced to the merest minimum, not to say anything about the much greater safety of the child, and of the more rapid recovery of the mother.

As to the quantity of blood to be abstracted, every case must be met on its own merits. While in some instances the loss of a few ounces may suffice, in others, especially in strong, robust, plethoric women, sixteen, twenty, or even thirty may be required. Dr. Dewees, to whom is justly due whatever praise or blame attaches to this practice, occasionally bled to

the extent of forty ounces before he succeeded in overcoming the rigidity of the os. Sometimes, indeed, he carried the operation even to syncope; always placing the patient in the erect or semierect position, so as to expedite and increase the effect.

Dr. Dewees informs us that he was led to adopt the employment of general bleeding in midwifery, near the close of the last century, from having witnessed its beneficial effects in the practice of Dr. Physick, in relaxing the muscles in dislocations of the shoulder-joint.

Out of the injuries now considered, often unavoidable, but in the great majority of cases the effects of gross ignorance, timidity, indecision, or the maladroit use of the forceps and of other instruments, has grown gynecology, a twin sister of surgery, the scientific foundation of which was laid hardly thirty years ago by the immortal Sims, aided by Bozeman, Thomas, and Emmet, of America, by Baker Brown, of London, and by Gustav Simon, of Heidelberg, all pioneer laborers in this great field of the healing art, now trodden by many thousand feet, and illustrated by special treatises and contributions alike honorable to their respective authors and creditable to their respective countries.

IMPACTED FRACTURE OF FEMUR IN A WOMAN OF EIGHTY-FIVE YEARS; BONY UNION.

BY D. S. LAMB, A.M., M.D.,
ARMY MEDICAL MUSEUM.

THE healing of fractured bones in the aged is looked upon by most authorities in surgery as a result rather to be expected than not, especially if the fragments have been impacted, and have not been separated by the unwise interference of the medical attendant. Prof. Agnew supports this opinion by a case of fracture of the thigh bone at ninety-five years of age, in which bony union took place.

I take it, however, to be rare for the opportunity to be afforded to *verify* the seat and character of fracture and mode of union in patients of advanced age, by post-mortem examination, and as such an opportunity occurred to me a few months since, and the specimen has been preserved, I have thought that the clinical and post-mortem data might be of interest enough to place on record.

M. A., white, widow, had always been healthy, except that in her youth she was paralyzed in the right arm, and the paralysis became permanent. Her mind was in a condition of progressive imbecility at the time of the accident mentioned below. On the 4th of March, 1881, she attained her eighty-fifth year, and the same day, in descending the stairs, she missed the lowest step, and fell to the floor. She was at once placed in bed, but no serious trouble was suspected until two days later, when I was called. The left leg and foot were everted; there was shortening of about half an inch; no crepitus, but pain on moving the limb, and much resistance on attempting extension; there were swelling and ecchymoses in the trochanteric region. She was kept at rest as much as possible, but in the weakened condition of her mind she repeatedly forgot her injury and attempted to use the limb. On the 8th of March, Prof. Thomas B. Hood saw her, in consultation with me. Her age and mental weakness considered, neither of us expected union to take place. The better, however, to secure rest a starch bandage was applied and morphia given in small doses. A bedsore threatened to form, but was averted. There was no appreciable rise in the temperature, and her appetite continued good. In a month she sat up in bed—in a year walked without support. In the autumn of 1883 she began to lose appetite, flesh, and strength, and in October took to her bed. She died October 28th, nearly three years after the injury, and in her eighty-eighth year. Her imbecility had steadily increased.

Only a limited examination of the body was permitted, that of the head especially being forbidden. A rapid survey of the organs of the chest and abdomen showed no lesion other than a general atrophy. The left femur was removed and the surrounding soft parts examined; the arteries showed no atheroma or calcification. The bone, after maceration, presented the following appearances: Its general condition is good; length fifteen and one-quarter inches (one-half inch shortening); weight just eight ounces. The line of fracture extends diagonally through the great trochanter from the posterior inferior to the anterior superior angle, thence downwards a little external to the anterior intertrochanteric line to about one inch below the lesser trochanter, thence upwards and backwards, one inch external to the posterior intertrochanteric line, to place of beginning; the posterior portion of the neck is also impacted to the depth of one inch, the line extending from the lower outer angle of the neck upwards and backwards in front of the lesser trochanter into the digital fossa, so that while anteriorly the length of the neck is normal, posteriorly the curved margin of the head is just half an inch (instead of an inch and a half, as it should be) from the intertrochanteric line. The summit of the head is on a level with the upper border of the great trochanter.

MEDICAL PROGRESS.

ACTIVE INTERFERENCE IN THE MANAGEMENT OF ABORTION.—A recent number of the *Zeitschrift für Geburts. und. Gynäk.* contains an article by DR. H. SPOENDLY, of Zurich, on the above subject. The interference which he recommends is simply that, in every case of abortion, the medical attendant should take care that nothing is left in the uterus, should completely remove placenta and membranes; and that in every case of threatened abortion, in which the hemorrhage is profuse and does not yield to treatment, the uterus should be emptied as soon as possible. The expulsion of the placenta should not be left to nature. In this recommendation there is of course nothing novel, nor has Dr. Spöndly any new instrument or method of effecting the desired end. The main importance and interest of the paper is in the fact that the author gives a series of fifty-three cases in which he acted on the principles which he lays down, and with uniformly good results.—*Med. Times and Gaz.*, April 12, 1884.

CHOLECYSTECTOMY FOR GALL-STONES.—DR. THOMAS SAVAGE reports a case of this operation, performed in 1883. The patient was a man of sedentary habits, who for years had been conscious of the possession of a liver. He had consulted an eminent specialist for such cases, who told him that he had a hydatid tumor connected with the liver, and that it should be punctured by aspiration as soon as possible, proposing himself to do it. When I was consulted, I at once found the presence of the tumor, and said that it was probably hydatid, but that it would be better to perform an abdominal section, and treat the tumor in the best way that was thought advisable when it was exposed to view. It was put before the patient as being an operation not less safe than aspiration, and yet more likely to be curative. This plan was agreed upon, and fourteen stones, varying in size were removed.

The tumor was about the size of a medium coker-nut, and was, in fact, a distended gall-bladder. On tapping it, the first two-thirds of the fluid was transparent and colorless, and a little viscid; the latter one-third was bile-tinged, in fact, appeared to be pure bile. I very much regret that the fluid was thrown away in the confusion of putting straight after the operation. It has been suggested to me, in explanation of the presence of these two fluids in one sac, that the colorless fluid might have been indeed hydatid, and was kept distinct from the true bile by a wall formed of the stones, which, on the collapse of the gall-bladder by the escape of the clear fluid, broke down, and allowed the bile above it to escape also. The appearance of, and the facets upon, the stones pointed to their having been in close contact before their removal.

This case is interesting in itself, but also more on account of its showing the inutility of advising aspiration, when a tumor can be directly treated under one's eye and touch. Here aspiration would not have been of the slightest use, and might have done much damage. Indeed, it would have been more risky than an abdominal section, as bile might without difficulty have escaped into the peritoneum; and, as a matter of fact, Murchison and others have reported a goodly number of cases of tapping followed by a fatal issue.

To prevent the future recurrence and dropsy of the gall-bladder, Langenbuch, in 1883, has recommended extirpation of the gall-bladder. Three of such operations appear to have been successfully performed. Langenbuch advises to begin by detaching the gall-bladder from the liver, and to tie the cystic duct.—*British Medical Journal*, March 8, 1884.

THE RADICAL CURE OF HERNIA BY THE METHOD OF DISSECTION.—At a recent meeting of the Academy of Medicine in Ireland, MR. KENDAL FRANK read a paper on this subject. The only two methods which seemed to him to give promise of extensive application in the future were (1) suture of the abdominal openings without removal or ligature of the sac; and (2) suture of the abdominal openings after excision of the sac. The first of these operation was applied to recent hernia before the sac had time to become enlarged and thickened. The method consisted essentially in cutting down on the tumor, carefully exposing the sac which had been returned into the abdomen, and then drawing together the openings by means of two or three sutures of stout silver wire, which should be left permanently in position. He advised that the skin should be drawn slightly upwards before the first incision was made, as by that means the skin would not lie directly over the wires. Thus union by first intention was promoted, and the permanent retention of the silver wire assisted. Three cases were related in which this method was employed.

MR. W. THORNLEY STOKER said there were two distinct classes of cases: the class in which operation was compulsory, where strangulation existed, and the class where operation was a matter of election to promote the patient's convenience rather than to save his life. In nearly all cases of operation for femoral hernia, a permanent cure had been effected; but in large inguinal ruptures a radical cure was not so frequent, and, in such cases, the peritoneum should be sutured. In the second class of cases, he advocated Wood's operation. He did not think it mattered much whether the pillars of the ring were drawn together or not. A cure was effected by the inflammation exciting the exudation of coagulum and lymph, which drew the parts together, thereby closing the opening as with a cork. He protested against leaving in the wire suture where the ring was sutured in inguinal hernia, as most unscientific and unsurgeonlike, and a possible source of future trouble.

MR. W. L. WHEELER mentioned the result of nine cases in which he had operated by different methods. In a case of inguinal hernia, on the left side of a male, he exposed the neck of the sac. He then drew it down and applied a ligature, divided the neck, and removed the sac below the ligature. This case was successful when seen two years afterwards. In a femoral hernia, on the left side, in a female aged eighteen, he opened the sac, pulled down, excised, and closed the edges, and the result, eighteen months afterwards, was most satisfactory. In cases in which the canal was greatly distended by a large hernia it would be almost impossible to have a radical cure follow any radical measure, and the most likely method was excision of the sac.

DR. MCARDLE observed that it was almost impossible to bring the edges sufficiently close together to keep behind the sac, and that the irritation of the veins was likely to produce phlebitis.—*British Medical Journal*, March 8, 1884.

PRIMARY EXTIRPATION OF THE ASTRAGALUS IN CASES OF IRREDUCIBLE DISLOCATION.—In a lecture published by the *Rev. Méd. de l'Est*, February, 1884, WEISS strongly advises to perform the operation at once when the bone cannot be reduced. The absence of an external wound is no contraindication, as the mortality, which was estimated at twenty-seven per cent. by Broca, has been lessened very materially by the introduction of the antiseptic treatment. In the author's own case (a simple irreducible dislocation outwards, with much inversion of the foot) the operation was difficult, and the wound did not heal for a long time; but after a few months the patient began to walk, and the result appeared to be quite satisfactory.—*London Medical Record*, March, 1884.

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SATURDAY, MAY 24, 1884.

RECENT VIEWS ON THE ORIGIN AND NATURE OF PNEUMONIA.

PERHAPS the most important subject considered at the recent Congress of German Physicians, sitting in Berlin, was pneumonia. The original paper was read by JUERGENSEN, of Tübingen, and the *confrère* to whom had been referred the consideration of the pneumonicoccus was FRAENKEL, of Berlin. The discussion was participated in by GERHARDT, of Würzburg, FRAENTZEL, of Berlin, RUEHLE, of Bonn, NOTHNAGEL, of Vienna, ROSENSTEIN, of Leyden, BAEUMLER, of Freiburg, and EDLEFSEN, of Kiel. At the same time, the results can scarcely be considered commensurate with the importance of the subject.

Within a few years past the views so long current as regards croupous pneumonia, that its cause is cold, its nature inflammatory, its initial symptom a chill, and its treatment antiphlogistic, have gradually given place in the minds of many to the idea that in croupous pneumonia we have an infectious disease. The natural difficulties in the way of substantiating such views have been diminished by the evidence which experimental pathology has furnished in the results of inoculation with the recently discovered micrococcus of pneumonia.

Closer examination has shown, too, that only four per cent. of the cases originate in exposure to cold, the remainder being doubtful or quite independent of it. Again, as to age, it was for a long time supposed that it attacked by preference the young and strong, but while statistics show that three-fifths of all cases occur from the first to the fourteenth year, the number of cases after forty-five is double that between fourteen and forty-four; and Jürgensen agrees with Flint in noting that it is the weak rather than the strong who are attacked by preference.

Jürgensen has also observed at Tübingen, at least, an interesting meteorological influence upon the occurrence of pneumonia, having noted that when the rainfall exceeded the mean, the cases were fewer, while an increase followed a fall below the mean—a relation to ground moisture similar to that so long observed in the case of typhoid fever. Edlefsen had observed the same relation at Kiel.

A further analogy to typhoid is observed in the effect of hygienic surroundings and peculiarities of its habitat upon the development of pneumonia, and Jürgensen called attention to the discovery by Emmerich, of the pneumonicoccus in the steerage of vessels. The question as to the contagiousness of pneumonia cannot, at present, be answered, it being very difficult to say of so widespread a disease, whether a case of apparent transmission is actually such, since it may depend upon certain coincident hygienic influences.

As to whether the poison of pneumonia is single or multiple, further information on this may be expected when the study of the microparasite is completed, but from a clinical study we dare only infer its unity, the striking variations in type and localization with which we are all familiar being in no way peculiar to it, but characteristic of all infectious diseases. The poison circulating in the blood has a special preference for the lungs and pleura, but it may manifest itself also in other situations, as is shown in cases in which the disease is ushered in by other symptoms, which give place at a later stage to those of pneumonia. Thus, Nauwerk found in the kidneys of thirteen cases dying of pneumonia, Friedländer's cocci, also incomplete zoöglea masses, in the veins; and Jürgensen discovered, in a case of pneumonia with cerebral symptoms, numerous cocci in the brain. Another peculiarity of the pneumonia poison is that its action is not gradual, as in typhus, but spasmodic, a special expression of this character being evinced in the temperature, which, in addition to the normal daily variations, exhibits numerous small variations throughout the day.

It is natural to expect that treatment should be modified to adapt it to such a view of pathogenesis. Hygiene, of course, acquires great importance, but, as yet, Jürgensen admits that treatment must, for the most part, be symptomatic. Iodine has been strongly recommended as an abortive measure, but he has had no experience with it. Especially is the heart to be watched, and an intermediate degree of antiphlogosis is recommended.

In the discussion which followed, Gerhardt ac-

cepted the views of Jürgensen as to the unity of pneumonia, and ascribed the so-called complications to a single poison operating diversely, as, for example, does the poison of scarlet fever. As to treatment, he, also, as well as Rühle, recommended the expectant and symptomatic method, with constant regard to the heart. In severe cases, he used quinine, and in high fever the cold bath, with simultaneous stimulation of the heart.

Fräntzel referred to the jaundice of pneumonia, a symptom imperfectly understood, which is sometimes accompanied by gastric symptoms, and at others not. He believed that the doubt regarding this symptom, especially in cases unaccompanied by gastric symptoms, was removed by the new views, since in these instances, at least, it might be regarded as hæmatogenous.

Rühle thought the infectious nature of pneumonia scarcely established because we dare not exclude altogether cold as an etiological factor. Rosenstein believed that pneumonia might be infectious, but not necessarily so; that it may be secondary to contracted kidney or to brain disease; and that treatment must vary according as the case is infectious or not. Jürgensen, however, thought these secondary pneumonias are not croupous.

Nothnagel cautioned against the too free use of alcohol, which he used only as a stimulant to the heart when it required it.

It is evident from the above that as yet little has been added to our knowledge of a proper treatment of croupous pneumonia, based upon the new views as to its pathology; while we are not certain that harm may not result from the unsettling of well-established principles of treatment. It is well known that, of late, the expectant plan of treatment of pneumonia has become quite general in some sections of this country. It is also well known that the mortality has increased during this period, rather than diminished. It is the belief, too, of men of large experience that some of the fatal cases would have terminated otherwise, if active antiphlogistic measures had been used; and we are ourselves inclined to believe that the expectant plan has been too generally followed, and that better results would have obtained if bloodletting were more common in this affection. It may be true, as Rosenstein suggested, that certain cases of pneumonia may be infectious, and others true inflammations, and that the treatment should differ accordingly. We do not, however, believe that the recognition of these differences of origin and nature is sufficiently easy to justify so complete an ignoring of antiphlogistic treatment. At any rate, the expectant and restorative plan is so invariably unsuccessful in grave cases that the antiphlogistic can scarcely be more so, and we recommend a more general return to it.

DR. GROSS'S PAPER UPON LACERATIONS OF THE FEMALE SEXUAL ORGANS.

OUR readers will be glad to have presented them the very remarkable paper prepared by the late DR. GROSS, for the Obstetric Section of the American Medical Association, and, by his own arrangement, now published in full in THE MEDICAL NEWS. The paper is of great interest as the last contribution of its distinguished author to medical literature; shortly after its completion, there came the weary weeks of physical prostration and pain, ending in death. There seems something almost sacred in this final work of one of the greatest men of the age, one to whom American medicine is most deeply indebted among her sons in the present century; it is not to be treated with irreverent pen, a jest would seem very profanity. It is a paper the full meaning of which cannot be had unless by careful reading and reflection.

We understand by it, in the first place, that the author had faith in the wisdom and goodness of nature, and then that it seemed to him these were being thwarted when so many women in the exercise of the reproductive function suffered such serious injuries as the gynecologist declares. Admitting the facts, they must result from bad obstetric management, from doing wrong things, and from failing to do right things.

But we think that the facts have been by some multiplied and exaggerated. For example, genito-urinary fistulæ are rare, and, so far as our observation teaches us, are of much more frequent occurrence in the practice of midwives than of physicians. These accidents may be apparently more frequent to-day than in the time of Dewees, simply because now they are cured, thanks to the patient genius of Marion Sims, and they become known; for in every State, nay, in almost every county of every State, there are surgeons capable of curing at least the great majority of cases, while formerly these unfortunate sufferers hid their infirmity by utter seclusion. So, too, in reference to the graver forms of perineal tears; for little more than a quarter of a century has passed since the late Prof. Meigs asserted them as incurable, and therefore sufferers would naturally shrink from revealing their unfortunate condition, since no good could come from the revelation.

Further, it is needless for us to repeat what has been so recently stated in our columns as to lacerations of the cervix in labor; they are, in the great majority of cases, simply physiological tears, not pathological in origin or in consequences, and, therefore, only exceptionally demanding or even excusing operative interference; that the parous os and cervix are to be brought back by a plastic operation to the condition of the virgin os and cervix, is a vagary which must finally cease.

But, taking the view which Dr. Gross adopted

from some leading gynecologists, there must be causes for these great evils, and means for preventing their occurrence. One cause for some of these undoubtedly, as stated by Dr. Gross, is the indiscreet, unnecessary use of the obstetric forceps. He has not uttered a single word in censure of this practice which will not meet the cordial endorsement of all thoughtful members of the profession; following his advice, many injuries, more especially to the perineum and to the external organs of generation, may be prevented.

But then, further, he advised bleeding in rigidity of the perineum, or of the os uteri; and if serious injuries to these structures are as frequent as represented—injuries that occur in spite of our morphia, chloral, and anæsthetic inhalations—by all means let us heed the words, and obey the teaching of our great master. The majority of the profession would agree in the advice, given by Dr. Gross, that bleeding is of value in threatened convulsions in pregnant women, though they might not regard the remedy as essential in all cases. While Dr. Gross stated other conditions in which he advised bleeding in pregnancy, in which few would be willing to follow the advice, unless very exceptionally, as, for example, in threatened miscarriage, yet the general lessons of his paper will be found more valuable the more they are studied.

GOVERNMENT REGULATION OF PROSTITUTION.

As from time to time the question of licensing houses of prostitution is discussed in this country, with the hope that by such action, with medical inspection of the inmates, the spread of venereal diseases may be checked, the latest facts in regard to the results of this plan are of interest. These are found in a volume published last year in Paris, upon "Prostitution in France," its author, Dr. Armand Després, having collected valuable statistics, and presented some important conclusions, the most valuable of which is that the more prostitution is subjected to regulations, the more prostitution is increased. Government control adds to rather than lessens the social evil.

Another conclusion is that where such regulation exists marriages are delayed, and the rate of increase of population falls most frequently to the minimum.

According to Dr. Després, there has been for years a steady depopulation of France, to be attributed indirectly to prostitution. The excess of births over deaths was only three per cent. in 1872, and in 1877 but one and three-fourths per cent. The facts and conclusions of Dr. Després are of very great importance and interest to the moralist as well as to the physician. Certainly they very clearly show that government regulation of prostitution is not an undoubted good.

Instead, therefore, of seeking to lessen venereal diseases by licensing houses of prostitution and subjecting their inmates to regular examinations, would it not be better, as suggested by our author, to make the communication of such malady a crime which, when knowingly committed, shall be punished by imprisonment of from six months to two years? Where the party communicating the disease was ignorant of the liability to do so, damages only would be required. But the court should at once compel these diseased persons, who were incapable of comprehending the danger they bore to others, to enter a hospital, where they should be required to stay until a medical examination showed that they were cured of all contagious accidents.

It is doubtful whether public sentiment in this country will ever permit legislation regulating prostitution in any way. Nevertheless there can be no question as to the urgent necessity of taking steps to prevent the spread of venereal diseases. Even if legalizing houses of prostitution were permitted, the disastrous results of such legislation, as ascertained in France, give no hope that it would effect the object in view, and therefore it would not be permanent. Possibly the plan of Dr. Després may be the best to lessen alike prostitution and venereal diseases. Certainly the question commends itself to the calm consideration of all thoughtful, conscientious, and philanthropic men, whether physicians or not.

PREGNANCY AND TYPHOID FEVER.

IN a recent Paris thesis the reciprocal relations of pregnancy and typhoid fever are discussed. The author, Dr. Savidan, does not consider the prognosis in regard to the fever as materially affected by the pregnant condition, but in two-thirds of pregnant women abortion is caused by the fever, and he attributes the injurious result to the action of the typhoid poison upon the uterus, increasing its irritability, and upon the fœtus, killing it by the poison directly, or by hyperthermia. We doubt if professional experience in this country will confirm the alleged great liability to abortion caused by typhoid fever occurring in pregnancy. Personal observation leads us to put the percentum of abortion, or of premature labor, much lower.

IN our issue of this and the preceding two weeks we have given in extra pages the equivalent of a whole number of THE NEWS, in order to promptly place before our readers full reports of the interesting annual meetings of the several national medical societies which have just been held.

SOCIETY PROCEEDINGS.

THE AMERICAN MEDICAL ASSOCIATION.

Thirty-fifth Annual Meeting, held at Washington, May 6, 7, 8, and 9, 1884,

(Specially reported for THE MEDICAL NEWS.)

SECTIONS.

SECTION ON OBSETRICS AND DISEASES OF WOMEN.

WEDNESDAY, MAY 7TH—SECOND DAY.

DR. THEOPHILUS PARVIN, of Pa., read a paper on

PUERPERAL SEPTICÆMIA,

in which he showed that the above title limited the disease to the condition in life peculiar to the female, and mentioned the physical, moral, and mechanical causes which are supposed to originate it. The causes are by some divided into autogenetic and heterogenetic; the former being a self-created poison endangering life. The autogenetic theory is a confession of ignorance. Scarlatina is never held to be autogenetic, although it may arise and be developed without apparent cause. By the theory of heterogenesis, woman enjoys greater safety. In sporadic cases of the disease the symptoms are the same as in those arising from assignable causes. Some well-known causes of the disease are found when it occurs after contact with the poisons of the cadaver, of epidemic erysipelas, or malignant uterine diseases, conveyed from the diseased to the susceptible patient, or from the miasms of the cesspool or the emanations of sewer gas.

Dr. Parvin related the occurrence of the disease in a patient in whom a retained placenta had been removed in fragments and incompletely. On the third day fever, sweats, and abdominal tenderness gave evidence of the affection, and the spread of the same disease to two neighboring patients showed its dangers. As in epidemics of scarlet fever the symptoms may be mild or severe, the intensity depending on the amount of the poison, the parts affected, the avenues of absorption, and the vital resistance of the subject. Its contagious powers have been demonstrated, and cannot be denied. Most obstetricians accept its cause as parasitic. To this effect we have the authority of Delore, Charpentier, Kleinmächter, as well as Spiegelberg, who shows it to be due to spherical bacteria. Milk fever is but a mild form of the affection, and the influence of microbes is also shown in phlegmasia alba dolens. Delore, 1869, Orth, 1872, and Heiberg, 1873, found the parasites with the exudations, and the last observer traced them into the lymphatics, and with them he produced the disease. Microbes, we know, act indirectly through a solution of septic products. During the first three months of the year's attendance at the Philadelphia Hospital in a total number of 72 women he had 20 cases of septicæmia and 3 deaths. This he accounts for in the bad hygienic conditions of the lying-in wards.

The author read some illustrative cases. One of a young colored woman, in which labor lasted twenty-four hours, the presentation being pelvic. On the fourteenth day after delivery, fever, pain, and symptoms of peritonitis announced the disease. *The patient did not have a chill;* death resulted on the seventh day. A *post-mortem* examination, made by Dr. Shakespeare, disclosed a general peritonitis, pleurisy, and pneumonia. The temperature at its maximum was but 103⅘° Fahr.

A second case was that of a patient who had had a good labor; she was seized on the third day with fever and delirium, *but no chill.* The uterus was tender, the temperature 105.3°, and death occurred on the fifth day of the disease. The autopsy made by Dr. Formad showed the lungs in an inflamed state and full of altered blood. The heart was soft, the muscles friable, and symptoms of a recent non-purulent peritonitis without exudation were present, whilst the mesenteric glands were much enlarged and full of cheesy infarctions. The size of the uterus was increased, its mucous membrane inflamed, and showing in parts commencing gangrene. The liver was that of acute yellow atrophy; the spleen was disintegrated, and the kidney softened.

Another case was that of a multiparous woman of twenty-four. It was a left shoulder presentation. The course of the labor was delayed by the accidental absence of the accoucheur. Podalic version was performed and a dead child delivered. By digital examination a vesico-vaginal slough was discovered on the second day. The patient had suppression of urine, irritable stomach, chills, fever, diarrhœa, and a foul lochial discharge. Death ensued on the eighth day. The examination after death, made by Dr. Shakespeare, disclosed peritoneal inflammation; uterus enlarged more than normally, its interior lining inflamed and partly gangrenous; and on the right side a rupture of the cervix and lower portion of the uterine body. The rupture was without indicative symptoms, an occurrence, as stated by Hervieux, as not infrequent.

Of seventeen cases which recovered, some had and some did not have chills. The secretion of milk was lessened or absent, whilst three constant symptoms prevailed: fever, painful abdomen, and arrested involution of the uterus. The highest rise of temperature noted was 106° F. The treatment was supportive, antiseptic, and antipyretic with uterine injections of carbolic acid solution or that of corrosive sublimate, 1 to 2000.

DR. SEYMOUR, of Troy, N. Y., mentioned an article in the April number of the *American Journal of Obstetrics*, in which he recorded the histories of two cases of the disease. In one it was associated with a traumatic hæmatoma of the right broad ligament, which suppurating, the patient died. The other was associated with a laceration of the supravaginal portion of the cervix on the right side. The uterus was washed out twice a day. In the beginning of the treatment a chill followed the injection, but this was subsequently avoided by the administration of twenty grains of quinine a short time previous to the introduction of the local antiseptic fluid. He thinks that his two cases will explain some of the conditions in cases in which examinations are not made.

DR. ROBERTSON, of South Carolina, has never seen a case of puerperal septicæmia in a negress during a practice of forty years.

DR. R. S. SUTTON, of Pittsburg, said that in obstetric practice he had served his day, and the sentiments expressed in the paper accorded with his own views. The disease is always perhaps due to a poison *sui generis*, and the autogenetic theory is but a confession of ignorance. Personal cleanliness is of prime importance,

and especially as regards the physician's hands. It is a precaution that all can take. The under surface of the tips of the finger-nails must be clean; the hands washed in turpentine and an alkaline solution.

DR. PARVIN, in reply to an inquiry, closed the discussion by saying that the antiseptics which he has used are two: carbolic acid and the corrosive sublimate. The experience of last winter led him to reject the use of vaginal injections, as the frequency of occurrence of the septicæmia was not thereby diminished, but in a certain number of cases it seemed to occur even more frequently. In septicæmia with fetid uterine discharge the intrauterine injections are indicated.

DR. WM. H. TAYLOR, of Ohio, read a paper on

THE MANAGEMENT OF PROTRACTED LABOR.

He limited his considerations to the conditions in the earlier stages of the process. He is justified in bringing up the subject by a quotation from Dr. I. E. Taylor on the neglect that the matter has received. The author thinks that rupture of the membrane should fix the close of the first stage. In the first stage the danger is exhaustion from pain, and the inhibition of labor by nerves of cerebral origin (*Lusk*).

Heretofore, active interference, he said, has been almost exclusively limited to the period after full dilatation of the os or even engagement of the head; but is not true conservatism to avert danger rather than be driven by some bad condition of the woman to a last resort? A commonly asserted cause of delay is "a rigid os." That such a state exists *per se* he doubts. Proper uterine contraction will be accompanied by appropriate changes of tissue of the cervix and os, and delay in labor attributed to a resisting os which is really due to insufficient uterine action, and local means resorted to, to dilate the os, are efficient from exciting uterine effort; spasmodic contraction of the os from fissure, too early rupture of the membranes, etc., may resist the powerful efforts of the uterus for a long time. While all are familiar with the symptoms of excess of liquor amnii, we rarely see notice of the effects of too little fluid; in such a case, Skene says: "A tense condition of the membranes may prevent bulging of the bag of waters, and the membranes may appear to the touch as if stretched across the os, or the head lies close down over the os uteri," and Dr. Taylor adds, a small uterine tumor, with the intestinal resonance, reaching close up to the solid mass. In protracted labor, if the head be not easily compressed, nothing will be gained by waiting, and he urged the adoption of version far earlier than is usually done. In the case under consideration, the head above the brim and the membranes unruptured, we have the conditions which make version easy and safe, and allow its performance before the woman is exhausted by long-continued suffering, and for the child we now have only the dangers of a breech delivery, which are less than an unaided delivery through a contracted pelvis. He rates it as the most valuable treatment.

Poverty and bad hygiene of cities are causes of the common pelvic malformations and of retarded labor. In the first stage ether, opium, Barnes's or Skene's dilator, and the forceps to bring the head into the cervix, may be required. Slight contraction of the brim is difficult to recognize. If the head be compressible, it may be permitted to wait. In early version with membranes unruptured the danger is less, and to the child only that of a breech delivery. He concurs with Johnson, of Dublin, in the early use of the forceps after rupture has prematurely occurred and pressure resulting. The view of Fritsch, that craniotomy should be done when pressure has long continued and there is no liquor amnii, because of the presumptive death of the child, will meet with little approbation in America.

DR. ISAAC E. TAYLOR, of New York, spoke of the gentle use of his forceps to bring the head in relation to the neck when digital dilatation, or dilatation by Barnes's method, is objected to. The use in such cases is a conservative principle.

DR. A. REEVES JACKSON, of Illinois, then read

A CONTRIBUTION TO THE RELATIONS OF OVULATION AND MENSTRUATION.

The aim of scientific investigations, he said, is the attainment of truth, and arguments to be successful must be based on known facts. After giving a short record of the dates and names of the early observers on the condition of the bodies first described by De Graaf, whose name they bear, the author continued to say that Baer, in 1827, by discovering that the follicle was not the ovule, but only the surrounding structure, laid the basis of the ovular theory of menstruation. Negrier, Barry, Fouchet, and others later on, showed that menstruation is due to ovulation. The theory became generally accepted because it seemed so reasonable, yet the author does not believe that all the facts have been fully observed or rightly explained. Ovulation and menstruation may be independent of each other. Malpighi saw the follicles developed in the fœtus and De Graaf the same in children. All obstetric writers admit that conception may occur without menstruation. A number of cases were quoted in which from eight to twelve children were born, the mothers not menstruating during the whole time. Yet arguments based on such facts are not satisfactory, since conception seems the preventive cause. Scanzoni admits that the Graafian follicles enlarge during pregnancy, and Meyhofer thinks this enlargement returns monthly during the period of gestation. Cases in which autopsies were made affirm these views. In a woman who had never menstruated, and who died at the age of seventy-eight, many false corpora lutea were found. Menstruation may occur without ovulation, as reported, in the cases of Gerhardt, Stedman, Senatri, and Meadows. Prof. Leypoldt has made a valuable contribution to the subject by his examination of the ovaries of thirty-two subjects in whom the date of the last menstruation had been fixed.

The author does not think that the point in dispute has yet been settled, but believes that Leypoldt shows that the Graafian follicles may rupture at any time without the occurrence of menstruation. He maintains, in conclusion, that there is no connection between the two but a mere coincidence.

DR. H. F. CAMPBELL, of Georgia, was pleased to find his views confirmed by the author. He, too, does not think that the two processes are to each other as cause and effect, but are independent. He thinks that after oöphorectomy menstruation is rather increased than diminished. He mentioned a case of Dr. Emmet, in which it continued for eighteen months afterwards, and

one of Dr. Engelmann of three years. The "egg-making" and the "nest-making" apparatus have also a distinct blood-supply. In another instance, after castration, the menstrual flow was so profuse that hæmostatics were needed. Puberty, with its signs, has a special purpose; it is to grow a womb and fecundated ovum. If favorable conditions do not exist, menstruation—a waste—ensues.

DR. G. J. ENGELMANN, of St. Louis, thought that the above views tend too far in one direction. He has examined many menstruating uteri and finds the ovule to have burst within from the first to the third day of menstruation. He holds the two processes to be coexistent, but not dependent. The purpose of the uterine congestion is to thicken the mucous membrane and prepare a bed for the ovule. If impregnation does not follow, a flow of blood relieves the state of congestion and carries away with it the superabundant tissue.

As a rule, if one function be disturbed the other is also likely to be so. We are yet ignorant of the full facts. In a case in which he thought he had carefully removed the ovaries and all their tissues, conception followed in three years. In a similar case he thinks some ovarian tissue was left. In answer to a question, Dr. Engelmann said he has never heard of or seen a third ovary.

DR. HEALY, of Maryland, called attention to the fact known to sportsmen that the spaying a bitch after rutting has occurred fails of its purpose, and she is still followed by other dogs. He thinks it due to the establishment of a bodily habit, and points out the interest that would be attached to the case of castration in a subject who has never menstruated.

DR. ROBERT BATTEY, of Georgia, thought that the discussion of the subject of menstruation is one in which opponents do not use the term in a common sense. Menstruation may occur in a child of four, a woman of twenty-five, and one of ninety-two. The one is true, the others pseudo-menstruation. Ovulation is not necessary to either, and in pseudo-menstruation the presence of Fallopian tubes, vagina, uterus, or vulva, is not essential for the occurrence. He holds that Dr. Campbell's views can be carried still further, and he asserts that sterility does not even follow after extirpation of the ovaries. He mentioned an instance of conception in which double ovariotomy had been done two years previously.

DR. JACKSON, in concluding the discussion, gave his definitions of ovulation as the ripening and extrusion of an ovule, and of menstruation, a sanguineous flow from the mucous membrane of the uterus. He does not think we can speak of a false menstruation because it occurs in a child or old woman. He has seen menstruation where only the cervix had been left after operation.

DR. J. HERBERT CLAIBORNE, of Va., read a paper on

THE USE OF CHLOROFORM IN LABOR.

His conclusions are founded on two hundred cases in private practice. He thinks the anæsthetic is not used enough, and gives the following as his conclusions: 1. The process of labor in all its stages is facilitated by chloroform. 2. The duration of all its stages is shortened. 3. The pain of all the stages is entirely and safely blunted. 4. The occurrence of accidents is less frequent.

In opposition to his views he quoted the opinions of others as expressed in Playfair's text-book, in which it is to be used only during the second stage, and the dangers of post-partum hemorrhage is insisted upon. His own views were once identical with these, but he now wished to make a public recantation. He described the sufferings of the woman and the great blessing which she found in the anæsthetic. In exceptional cases, in which there is little or no pain, he does not think it necessary. In the first stage chloroform need only be given during the pains and not in quantities sufficient to produce unconsciousness. In a stubborn and undilated os chloroform relaxes the circular fibres and dilatation ensues. In the pains of descent and in the last severe agony the author's feelings impel to its use. He has not seen labor delayed or arrested. In only one instance was the perineum ruptured, and then as the result of the unskilful use of the forceps.

To show the influence of an anæsthetic on labor, he related the history of a woman who, upon some one's advice, became intoxicated just before her confinement, from the effects of half a pint of whiskey. In six hours every stage of labor was completed, yet during all this time there was no other manifestation of life from the mother. In the third stage he believes it increases uterine contraction and diminishes the risk of hemorrhage. Chloroform is the sheet-anchor in puerperal convulsions. As to its action in retained placenta and hour-glass contractions, he has had no experience. In instrumental and manual interference it is imperatively demanded. He used the chloroform prepared by Squibb—it is more rapid, certain, and agreeable than ether, whilst it does not possess its stimulating or intoxicating effects. In answer to an inquiry, the author replied that he has seen no bad effects on the fœtus from its use.

DR. JEPSON, of W. Va., has been more and more impressed by the frequency of short and easy labors; he has not observed the agony and suffering of which the author spoke. He found that chloroform induces hemorrhage by lessening the uterine contraction. He limits its use to instrumental deliveries or unusual suffering. In the majority of cases he lets nature do her perfect work.

DR. A. DUNLAP, of Ohio, made some remarks on

AN IMPROVED METHOD OF TREATING THE PEDICLE IN THE REMOVAL OF LARGE INTRAPERITONEAL FIBROID TUMORS.

In the removal of these tumors, a successful treatment of the pedicle is necessary to make the operation legitimate. He is satisfied that the pedicle after ovariotomy does not slough, but becomes revitalized. He has invented a clamp and self-threading needles, by which the pedicle is so secured that no hemorrhage occurs, and there is no laceration or injury to the peritoneum covering the stalk; the sutures and the divisions are both practised on the proximate side of the clamp.

THURSDAY, MAY 8TH—THIRD DAY.

DR. ISAAC E. TAYLOR, of New York, read a paper on

THE MANAGEMENT AND RECTIFICATION OF THE CHILD'S HEAD IN DIFFICULT CASES OF OCCIPITO-POSTERIOR PRESENTATION.

He gave a summary of the important views on the cranial position since the subject was treated by Naegele,

Sr., in 1819, the natural mechanism of the presentation, and the methods of treatment. He next considered the theories explaining rotation of the head. He holds that the movements of the child's head is explained by the action of the uterine forces on the vertex. The uterine action must coincide with the uterine axis. In some cases he has seen rotation occur in the intervals of contractions. He thinks face presentations are accompanied with no more dangers than are occipito-anterior. Should the perineum be much distended, and the head unable to escape from under the pubis, artificial aid is needed.

For rotation to occur in some difficult cases it is essential that the shoulder enter the superior strait, and rotation of the head and shoulder to coincide. In the use of the forceps he pointed out the necessity between consonance of action in their use, and natural rotation. Traction, too, may cause serious injury. When forceps fail, manual aid is needed. The hand is the natural and essential means. We may either move the position of the head or make it a face presentation. Conjoined manipulation is of great value. The literature of the subject, and his own experience justify him in proposing the applicability of converting some of these cases into face presentations.

A paper on the

CAUSES AND PREVENTION OF LACERATIONS OF THE FEMALE SEXUAL ORGANS,

by the late DR. S. D. GROSS, of Philadelphia, was read by Dr. S. C. Busey, of Washington, D. C. (see page 599).

DR. BATTEY, of Georgia, said that he has never regretted the use of the lancet; he does regret that he has not used it more boldly.

DR. CAMPBELL, of Georgia, remarked that he was glad that his views were consonant with those of Dr. Gross and Dr. Battey. Bloodletting in labor and in eclampsia has been unjustly condemned and laid aside. As substitutes we have chloroform, chloral, potassium bromide, and cold to the head. If puerperal convulsions be due to anæmia of the brain, why give such exsanguinating remedies as these? If, however, uræmia be their cause, then the presence of urea is due to renal congestion. Then we should bleed to bring about healthy elimination from the kidneys. An experiment he performed on a common fowl, makes him question the statement that bleeding will produce convulsions. For having cut all the tissues through down to the cervical cord in front, the bird died without a struggle.

DR. T. B. HARVEY, of Indianapolis, with the utmost respect and honor for the great author, thought the subject should be freely discussed. He thinks the other side ought to have an expression of opinion. He began to bleed because of the teachings of Dewees, but he now obtains better results from chloroform and opium.

DR. R. S. KINLOCH, of South Carolina, was anticipated in some of his remarks by Dr. Harvey. Dr. Gross is an illustration of the power of early impressions. He disagreed entirely with the statements made in the paper. He has never bled in a practice of thirty-five years, and has lost but two cases dependent on the parturient state. Would Dr. Gross have applied the same rule to surgical cases? The effects claimed are *post hoc*, and not *propter hoc*.

DR. SEYMOUR, of Troy, N. Y., thinks the locality of importance in the good results from venesection. In Vienna it has been shown that bleeding is not necessary in the treatment of puerperal convulsions.

DR. T. A. REAMY, of Ohio, said that, whilst mourning the death of the great man, his paper should stand on the same ground as if he were living. Hence, he could not let the article go on record unchallenged. In advocating "bleeding for fever," he does not make the distinction that the febrile state may be but the storm produced by sepsis. Why lessen the quantity of the blood when physiology and Scripture teach that it is "the life thereof." For a rigid os and nagging pain, the rationalist would give chloral or morphia; or, if the pulse be high, an arterial sedative. In only a few cases of puerperal convulsions is bleeding best. Especially will these be few after one has once seen the effects of morphia. No doubt the forceps are used too frequently by some, but the remarks of Dr. Gross cannot apply to the light and elegant forceps of modern times. The present student uses the instrument better after practice of two years than did the average practitioner of twenty years ago. Recent works have made the subject plain. The forceps is not used more than once in fifteen or twenty-five cases.

DR. WATHEN, of Kentucky, thought that chloral and chloroform deplete the brain less than bleeding does. He has never seen a case in which fever or abortion could be benefited by it. It is applicable in puerperal eclampsia, where excess of the blood in the brain may be fatal. All of the woman's blood is needed to sustain the puerperal condition properly. He thought the Society should not adopt so pernicious a doctrine until it had been well considered.

DR. W. M. FINDLEY, of Ohio, then read a paper on

THE RATE AND CAUSE OF MORTALITY IN ONE THOUSAND CASES OF LABOR IN PRIVATE PRACTICE.

The fatal result in some of the cases he accounted for by the wretched condition of the patients, and the time that elapsed before assistance could be given.

DR. WM. T. LUSK, of New York, read a paper on

SUDDEN DEATH IN LABOR AND CHILDBED.

He was called to patient on the first of January, 1884, at 6 A.M. She had been in the erect posture for hours. She did not wish the forceps to be used. At 1 P.M. her face was colorless, but there were no symptoms of suffering and an anæsthetic was given. A child was delivered by means of the forceps. As was anticipated, hemorrhage occurred, and was arrested by hot-water injections after a few pints of blood had been lost. The patient had all the appearances of severe shock, and died at 7.30 P.M. He considered the causes of sudden death resulting from pulmonary embolism and air in the veins, and illustrated his remarks by the histories of cases and the results of autopsies. He considered, therefore, death as resulting from nerve exhaustion or shock, and in which neither air-bubbles nor embolisms are found. Pathology teaches shock to be due to reflex paralysis, especially of the splanchnic nerves. The causes predisposing to severe shock are well known in military surgery, and it would be singular could not similar conditions prevail in childbed. In the process of labor the torture is as great as that which victims of justice once suffered, in whom, as is well known, *shock*

often put an end to the agony. He insisted, in conclusion, on the dangers of a prolonged first stage when the membranes are unruptured.

DR. B. B. BROWNE, of Maryland, then read a paper on

MALFORMATIONS IN THE FEMALE SEXUAL ORGANS RESULTING FROM ARREST OF DEVELOPMENT.

Case I.—A small female, who never menstruated. The external genitals were well developed, the vagina ending in a cul-de-sac one and one-quarter inch long. Neither uterus nor ovaries could be detected.

Case II.—A. R. Had periodical headaches, and had never menstruated. External genitals normal, hymen intact when cut, and infantile cervix perceived. Electricity was used once a week; the patient menstruated, and the uterus developed.

Case III.—M. T., aged nineteen. Had never menstruated; she had monthly pains in the head, relieved by epistaxis. The uterus was small, the cervix nipple-shaped, and the os permitting the passage of a probe. Cured by electricity.

Case IV.—Autopsy of a female aged nineteen; had never menstruated; vulva natural, vagina ending in cul-de-sac three inches deep, no rugæ on surface. Bladder and rectum adherent; ovary, uterus, and Fallopian tube of the size of an apricot.

Case V.—A. T., aged thirty-two. Had never menstruated; was well developed. There was intense sexual desire. Vagina ending in cul-de-sac two inches deep. The finger met an elevation—the rudimentary uterus—on the right side.

The author's conclusions are: 1. Malformations before puberty are due to arrest of development. 2. The ovary is developed with the uterus. 3. The external genital organs are developed independently of the internal. 4. The patulous urethra found is due to an arrest of development, and not to sexual intercourse. 5. In congenital atresia a patulous vagina is the rule, not in the acquired.

The following papers were read by title: *On a New Suture*, by Dr. S. C. Dudley, of Illinois; *Mechanical Methods and Appliances in Uterine Dislocations and Distortions*, by Dr. H. F. Campbell, of Georgia; *Surgical Operations for Cancer of the Uterus*, by Dr. W. H. Byford, of Chicago.

SECTION ON SURGERY AND ANATOMY.

WEDNESDAY, MAY 7TH—SECOND DAY.

The first order of procedure was the discussion on the paper of DR. F. S. DENNIS, of New York, on the

TREATMENT OF COMPOUND FRACTURES.

DR. QUIMBY, of New Jersey, remarked that in all compound fractures it is highly important that all sharp fragments of bone be removed in order to prevent their irritating action on the wound. In speaking of Listerism, he called attention to the fact that even with the use of all the antiseptic measures of that system, bacteria have been seen to thrive.

DR. T. R. VARICK, of Jersey City, then read a paper on

RAILROAD INJURIES OF THE EXTREMITIES, WITH OBSERVATIONS ON THE SITE OF AMPUTATION, AND SUBSEQUENT TREATMENT OF THE STUMP.

He considered injuries to the extremities not only when the result of railroad accidents, but also when inflicted by any crushing blows at great momentum. He spoke first of the increasing frequency of these injuries, with the increasing use of heavy machinery. Owing to the great weight and high rate of speed, injuries inflicted by trains in transit are of a most destructive character. The traumatism is not confined to the immediate part struck. The appearance of the integument is not always a criterion of the condition of subjacent parts, as there may not be the slightest abrasion thereon, and yet the underlying muscle and vascular systems may be hopelessly destroyed. In reference to the *modus operandi* of a force acting in this manner, the author gave this explanation: We know that a muscle may be ruptured by its own contractile force, especially when taken by surprise, or in an awkward position when struck. The effect of blows in producing muscular contraction was illustrated by the patellar tendon-reflex. The same phenomenon follows a blow upon the tendo Achillis with the foot firmly flexed. Since Gowers has shown that this contraction followed the blow too quickly to admit of the stimulus travelling to the spinal cord and down again, the movement must be due directly to the stimulation of the muscles themselves. A blow upon a muscle held in extreme tension causes violent and repeated contraction, and in a case in which great momentum inflicts the blow, it is fair to assume that rupture of the contracting muscle or its tendon to a greater or less extent may ensue. In railroad injuries, the involuntary contraction in conjunction with the efforts of the victim to free himself, would produce some of the lesions which come under our observation. Again, the liquids of the body are confined within strong tegumentary and fascial coverings, blows rupture these envelopes in many places, pulpify and comminute the tissues beneath and eject the fluids to a distance, it may be, into other tissues; and the lymph and blood are thrown back through the large vessels with the momentum of the blow struck. This force, the author said, is received on the one hand by the right side of the heart, and may result in a fatal paralysis. He considers the rupture of vessels a fortunate occurrence, as relieving this tension. On the other hand, the blood flowing from the arterial side of the heart is also suddenly arrested.

In speaking of the site of amputation, the author said that he had made it a rule to give the point of injury a wide berth, since he had found that, no matter how skilful the operation, if it did not go beyond the contused part of the limb, sloughing of the stump occurred. This sloughing, too, involves not only the integument, but the connective and muscular tissues in some cases, the muscles sloughing even more than the integument. It matters little what method of operating is employed. The author, however, referred to a number of important points in the general care of the limb before and after the operation, including its dressing with proper antiseptic precautions. The importance of a large drainage-tube was insisted upon. Conservative surgery was recommended in all injuries of the hand and foot, amputation being avoided in most cases.

Several cases were reported illustrating the severity of injuries, the dangers and complications that may ensue, and the best methods of treatment. That the treatment was a successful one, the author supported by statistics, showing that of twenty-one major amputations made by him, all recovered, and of five other major

amputations he had but one death, and that, due to secondary hemorrhage, on the fourth day, in a debilitated patient. In conclusion, the author epitomized his treatment thus: Amputate through sound tissue, and keep the stump clean.

DR. QUIMBY thought it was a great mistake, and one too often made by physicians, to think that because a railroad injury caused no immediate severe symptoms, the time of danger was passed. Cases were referred to in support of the statement.

The committee appointed to draft

RESOLUTIONS ON THE DEATH OF DR. S. D. GROSS

reported the following:

Resolved, That the Surgical Section of the American Medical Association have received with a sense of profound regret the intelligence of the death of Samuel D. Gross, of the State of Pennsylvania, one of the greatest ornaments of this Association, and one of the most distinguished teachers and authors in the medical profession of the United States.

Resolved, That the memory of the deceased deserves to be cherished with love and veneration by the members of the profession. As a man thoroughly versed in the medical science, he is worthy to be ranked with the greatest and ablest of our age and country. He had mastered the vast learning of his profession, and the natural kindness of his great and generous heart was such that throughout his long and successful career as a practitioner he was continually experiencing the most intense satisfaction in relieving, by his science, the sufferings of humanity.

Resolved, That a copy of the resolutions be printed in connection with the record of the transactions of the Section, and that a copy should be transmitted to the friends of the deceased.

The paper of DR. CHARLES A. LEALE, of New York, *Tracheotomy in Diphtheria*, was read by title.

SPONTANEOUS FRACTURE OF VESICAL CALCULI.

DR. J. W. S. GOULEY, of New York, presented a specimen of a calculus which had undergone what is usually known as spontaneous fracture within the bladder. The question, he said, is whether spontaneous fracture ever occurs, and if so, how; if not, what the phenomenon truly was. The specimen presented consisted of eighteen or twenty fragments of various sizes and shapes, and the speaker did not doubt that a considerable number of similar pieces had escaped by the urethra. This detritus came from a patient seventy-nine years of age, who had been under treatment for some obscure vesical trouble for a year or more, and into whose bladder sundry instruments, soft and metallic, had been introduced. About two years after first noticing the trouble, he fell into the hands of a physician of this city, who dilated the urethra somewhat and discovered a stone. After the sound had been used for a week or two, the patient passed several fragments from the urethra. The patient had probably some, but not great, hypertrophy of the prostate, or the fragments could not have passed. On several occasions he passed other fragments, and the rest of the small fragments were removed by aspiration. Some time after this, the patient was submitted to an operation, after which he did not long survive. The speaker believed it a case of what is known as spontaneous fracture. The stones were all smooth, but did not present any regular facets. The fracture had evidently occurred some time, probably months, before the passage of the fragments.

In regard to the question, How does this phenomenon occur? the speaker said that he thought the best explanation he could give for it, since so little is said of it in the text-books, was that the fracture was similar in occurrence to that which occurs in Prince Rupert's pearls. He thought it probable that a vesical calculus might, like these little drops of glass, be very hard and smooth, and yet, if scratched to never so slight a degree, fly to pieces. He thought it not at all unlikely that the instruments introduced so frequently might have produced a slight erosion, causing the fracture.

DR. L. A. SAYRE inquired whether the speaker had had an opportunity to examine the patient before the time of operation, and whether he could state anything in regard to the size of the stone before fracture.

DR. GOULEY replied that the stone had been broken long before the operation occurred, and before he first saw him.

DR. J. FORD THOMPSON, of Washington, reported that he had performed a lithotomy in which he found a fractured stone. He had introduced sounds, and had attempted to crush the stone by Bigelow's method, but the bladder was so contracted that he found it impossible to separate the blades of the instrument far enough to get even the smallest fragment into it. He was positive, therefore, that he had not caused the fracture of the calculus with it. After operating, he extracted five stones, each much larger than any of those presented by Dr. Gouley. He believed, however, that he must have broken the stone in extracting it, for it was rather soft, and he did not consider it a spontaneous fracture, yet he thought it possible that the firm contraction of the bladder might have caused the fracture. The case terminated very much as did the case of Dr. Gouley.

DR. HUTCHISON, of Brooklyn, presented a mulberry calculus which he had removed a year ago from a young man of twenty. After recognizing the condition in the usual examination, he had performed the bilateral operation, and found the stone in two fragments, as he now presented it. The patient had never had any instrument in his bladder until he introduced it, and he had never suffered any pain. He was satisfied that this was a case of spontaneous fracture.

DR. PREWITT, of St. Louis, asked Dr. Hutchison whether the calculus presented by him showed a distinct line of fracture, or if the edges were smooth and rounded off. The reply was that the line was distinct. He then said that he thought it possible for a very much contracted bladder to cause the fracture of a soft calculus, but that certainly such could not occur in a mulberry stone.

DR. POLLOCK, of Pennsylvania, reported that he had operated upon a patient seventy years of age, and had removed from his bladder sixty-six stones. They were of regular triangular, pyramidal form. He said that the idea of spontaneous fracture had not occurred to him until now.

DR. W. W. DAWSON, of Ohio, thought that the calculus exhibited by Dr. Gouley must have been broken, if broken at all, by his instrument. It is impossible for

the bladder to contract on a stone so as to fracture it. One point in the history of Dr. Hutchison's case struck him forcibly, and that was the absence of pain. He had found this usually the case where the rough surface of the calculus had become worn smooth. He had once removed a remarkably large mulberry calculus, fully as large as a hen's egg. That patient had for fifteen years suffered from irritability of the bladder, having to rise at night more frequently than he should, but further than that there was nothing at all to indicate the presence of a stone. He had no pain.

DR. GOULEY agreed with Dr. Dawson in regard to the impossibility of the bladder ever causing fracture of a stone contained in it. He said that a bladder so contracted and contractured had not strength enough in its walls to expel the urine, and of course it could not break a stone. But besides that, it was unscientific, unpathological, and unsurgical to think of such an occurrence. He preferred the explanation he had given, comparing it to Prince Rupert's pearls.

DR. PREWITT asked how, if this comparison were correct, it happened that in Dr. Hutchison's stone there was but a single line of fracture, and not numerous, since the glass drops usually break into many pieces.

DR. GOULEY thought it a remarkable exception to the rule.

DR. C. A. WHEATON, of Minnesota, contributed a paper on

AMPUTATION AT THE HIP-JOINT, WITH A REVIEW OF THE VARIOUS METHODS OF CONTROLLING HEMORRHAGE.

He said that as he had made two amputations at the hip-joint during the past year, according to the recent method of Mr. Lloyd, of England, this led him to review the literature of the subject from its first employment, in 1848, to the present, with special reference to the methods of controlling hemorrhage.

The various methods were then narrated; pressure with the thumb or fingers, securing the vessels as they were divided in the flaps; pressure upon the common iliac, or on the aorta; tourniquets of various kinds, and preliminary ligation. The speaker then discussed the objections to these methods on the ground of their inefficiency, the delay or the dangers of trouble following their employment. There was danger to the sound side as well as to the diseased from the pressure of a tourniquet. Davie's lever, which has been most in favor, has always been considered safe, but a death occurred from it not long ago, due to peritonitis occasioned by its use. The hand has been introduced into the rectum to control the circulation, but this is not free from danger, and the arm of the assistant is frequently in the way of the operator. Reference was also made to a case reported by Dr. Varick, in the *American Journal of the Medical Sciences*, October, 1882, in which Trendelenburg's method was used; this consists in transfixing the leg with a small spear-pointed rod, running through close to the bone and making pressure by a figure-of-eight cord passed around the limb and over the ends of the rod, then amputating with the Lisfranc knife. He also described the method of Mr. Furneaux Jordan for articulating, and several other methods, including a detailed account of that by Mr. Lloyd.

DR. T. R. VARICK, of New Jersey, in moving the reference of the paper for publication, stated that he had recently made the Lloyd amputation. He also exhibited the spear used in the method by transfixion referred to in the paper, and stated that with it he had been able to make an almost bloodless operation.

DR. BYRD, of Illinois, remarked that he saw no need for an assistant to hold the rubber cord in place in the operation of Lloyd. He had modified it by passing the cord up over the anterior superior spinous process of the ileum, then down and around the limb, forming an eight; the ends were then tied, and no assistant was required.

DR. MURDOCK, of Pennsylvania, expressed distrust in the elastic compression where the limb is well developed and very muscular.

DR. DAWSON reported the case of a child upon whom he made this amputation about two years ago, using only the elastic tourniquet. He was surprised at the ease with which the hemorrhage was controlled, the operation being literally a bloodless one.

DR. MCGRAW stated that he had amputated three times at the hip-joint, with but one death, and that he controlled the hemorrhage with very little difficulty, and with no important loss of blood.

DR. MACLEAN favored the use of the abdominal tourniquet. He said it was very simple, easily applied, safe, and secure. He had never had any bad effects from it, except once where he applied it too long before it was required. He used the abdominal tourniquet in operations well down in the thigh.

The papers of Dr. Joseph Ransohoff, of Cincinnati, on *The Excision of Nasal and Naso-pharyngeal Polypi by a New and Easy Method;* of Mr. A. Pearce Gould, F.R.C.S., of London, on *Twelve Months' Experience at the London Temperance Hospital;* of Dr. Roswell Park, of New York, on *Tuberculosis of Bones and Joints, and Its Treatment by Ignipuncture;* and of Dr. C. B. Nancrede, of Philadelphia, entitled *Is Carcinoma Mammæ Curable by Operative Procedure*, were read by title.

DR. WILLIAM A. BYRD, of Ill., then read a paper on

A CALCAREOUS CALCULUS FOUND IN THE SUBSTANCE OF THE LIVER,

in which he reported a case that he considered unique. The patient had been suffering for four months with fever, rigors, and colliquative sweats, and had been treated by various physicians for malarial trouble. When he examined him, he found enlargement of the liver, and making an incision between the ninth and tenth ribs gave vent to a pint of pus. Probing the wound some days after, he discovered a hard body that he at first mistook for necrosed bone; being unable to remove it with the forceps between the ribs, he excised an inch and a half of the tenth rib, and removed it. During removal it broke, but the fragments aggregated a larger mass than the end of a man's thumb, and when dry weighed one hundred and fifteen grains. In appearance it was phosphate of lime. He considered it likely to have resulted from a thrombus of some branch of the hepatic artery cutting off nutrition from a portion of the liver which became the seat of the earthy deposit. The patient from whom it was taken recovered.

DR. N. SENN, of Milwaukee, then read a paper on

BRANCHIAL CYSTS OF THE NECK.

He referred first to the importance of all tumors of

the neck, because of their location. He then reviewed the numerous names applied by different authors to what he preferred to call branchial cysts. He choose this name because it expressed more correctly the nature of the affection. The anatomy of the structures involved was then closely studied, including the embryonal development. The location of these tumors was then found to correspond to that of the branchial clefts of the embryo. They are more likely to occur in the second and third clefts than in others, although they may occur in any part of the neck, the immediate cause being the folding in of a portion of the cleft so as to form a closed sac.

The literature of the disease was closely studied, and a large number of cases referred to as reported by Langenbeck, Billroth, Virchow, and others, with references to the opinions of the operators in regard to them. The histological structure of the cysts was next described, and the ciliated epithelium sometimes found in them traced to the origin of the tumor in the branchial cleft. The character of the contents of the cysts depends largely upon the amount of retrograde metamorphosis that had occurred in it. The varieties of branchial cysts were named mucous, atheromatous, serous, and hæmatoid. Unlike cutaneous cysts, these tumors never contain the products of the secretions of the skin, but only the products of a retrograde metamorphosis of the epithelial cells lining their interior. The different varieties were described, and a number of cases reported, including three which had occurred to the author.

In regard to the time of the development of these tumors, the essayist said that, although they owe their origin to an embryonal tissue, it is not essential that they should begin their growth at so early a period. It is only necessary that the tissue be there formed, and the abnormal growth will occur later in life. The most frequent time for this to occur is at puberty.

Although it is not essential to a proper treatment of the tumor that a positive differential diagnosis should be made between it and cutaneous growths or cysts of other kind, the use of exploratory punctures was advised. The various other methods of differential diagnosis were also carefully considered. The methods of treatment that have been tried are, incision, the actual cautery, seton, and puncture, with the subsequent injection of irritating fluids. The treatment must be thorough. Nothing short of complete extirpation is worthy of trial. Antiseptic measures should be in some cases, at least, added to the other treatment, and the general condition of the patient must be looked to.

DR. W. A. BYRD called attention to the treatment by electrolysis, and expressed surprise that it had not been referred to by the author of the paper. He had tried it in several of these cysts, and found that it worked admirably. It is not painful, leaves no scar, and is perfect in its results. The great difficulty was that most persons do not use enough cells. He would not think of a less number than eighteen, and would not hesitate to use a stronger current.

DR. SENN replied that he had used electrolysis, but that it had failed. He could not see how it would be possible for such a treatment to remove a cyst lined with a tissue so much like skin, and so ready to proliferate. He would gladly accept any treatment that would remove these tumors short of a complete extirpation; but he believed that the only treatment was to resort early to a radical operation. The tumors, if they have not been meddled with, can usually be easily enucleated.

The paper of DR. P. S. CONNER, of Cincinnati, on *Intestinal Paralysis Consequent upon Acute Pressure*, was read by title.

THURSDAY, MAY 8TH—THIRD DAY.

DR. CHAS. W. DULLES, of Pa., read a paper on

THE TREATMENT OF HYDROPHOBIA, HISTORICALLY AND PRACTICALLY CONSIDERED,

in which he gave an extended review of the literature of the subject from the days of Aristotle to the present time.

DR. H. O. WALKER, of Detroit, moved that, as the paper of the Chairman, Dr. Parkes, had been referred to the Section, and an opportunity for hearing it had not been given in the general session, the author be requested to read his paper before the Section.

DR. CHAS. T. PARKES, of Chicago, then gave a brief abstract of his address on

GUNSHOT WOUNDS OF THE INTESTINE, AND THEIR TREATMENT.

[See THE MEDICAL NEWS, May 17th, page 563.]

DR. QUIMBY asked how near together the sutures should be placed in the intestine.

DR. TREMAINE, U. S. N., stated that he had made a number of experiments with a view of determining the very questions contained in Dr. Parkes's paper. He agreed with that gentleman in the belief that the abdominal cavity should be opened in cases of wound of the abdomen, in order to see what damage had been done. He thought it a disgrace for a surgeon to stand idly by and do nothing in such cases.

DR. DUNLAP, of Ohio, had not had any experience in gunshot wounds of the intestine, but reported a case in which a large portion of the stomach was torn away by a shaft in a machine-shop, and yet the wound healed. He objected to the statement in the paper that parts included in a ligature of the mesentery sloughed; basing his belief that it became vitalized on what he had seen take place in the stump of an ovarian tumor.

DR. J. FORD THOMPSON, of Washington, had the opportunity within the last year or two, to witness a great deal of abdominal surgery in the clinic of Billroth and other German surgeons. He had there seen a modification of Lembert's stitch, which was devised by one of Billroth's assistants, and which he considered better than that of Dr. Parkes. It consisted in first stitching together the peritoneal surfaces of one-half the calibre of the wound, then the mucous membrane on that and on the other half, and finally the peritoneal surface of the latter side; in this way leaving two rows of sutures which effectually prevented the passage of fecal matter or even of gases through the wound. It also did away with the danger of strictures, which are so common after Lembert's suture has been used.

DR. P. S. CONNER remarked that certain points must be remembered in the consideration of this subject. These experiments on animals, to determine with what result a bullet passes through the abdomen, and to ascertain the best method of treating the injury in man,

were all very proper, but the conditions in the one case are often very different from those in the other. There is also a great difference between the treatment of such cases in civil and in military practice. In the latter, cases are received earlier and the surgeon is at liberty to use his judgment; but in civil practice the cases are frequently not seen until hours have elapsed, and even then the patient often refuses to have anything done. He stated that during the late unpleasantness at Cincinnati, he had received a case in which he desired to open the abdomen, but was not permitted to do so until the patient was moribund. He referred to the value of the temperature as an indicator whether or not the intestine had been injured, and was pleased to hear what had been said in regard to letting the wound alone, as a fresh incision was much safer, as well as more convenient.

DR. BYRD reported a case in which he removed successfully several inches of intestine in a case of strangulated hernia occurring in a very old patient, who was moribund at the time of operation. He further stated that he had operated nine times on the intestine; three times removing a portion of the entire calibre; three times removing a section; and three times making an incision. In removing a portion of the entire calibre, he had cut vertically, in order to prevent the formation of a circular cicatrix, which might lead to stricture.

DR. MURPHY said that in his experience with gunshot wounds of the intestine, the patients all died. He moved a vote of thanks to Dr. Parkes for his admirable paper.

DR. SAUNDERS, of Tennessee, in seconding the motion, remarked that heretofore our patients have died without aid, but that hereafter no military surgeon would be justified in allowing an individual with a wounded intestine to die without an operation.

DR. PARKES, in concluding the discussion, said that he had studied the double suture carefully, and that there were too many objections to it. The chief objection urged was that it required so much time for its introduction that the patient would be dead before it was accomplished. He believed, too, that the danger of rolling in of the mucous membrane was just as great with the double as with the single suture. Further, his suture was not Lembert's, but was an entirely different and a better one, for it took a much deeper hold in the tissues.

DR. T. F. PREWITT, of St. Louis, read the report of

A CASE OF CHRONIC SEROUS SYNOVITIS OF THE KNEE, WITH AN ENORMOUS COMMUNICATING POPLITEAL BURSA EXTENDING TO THE TENDO ACHILLIS.

The case reported was that of a young man who was accustomed to sit constantly in a damp room, upon a revolving stool, where he frequently struck his knee against his desk. In November, 1882, he came to him with a swelling of the knee. He had no pain, and he could not fix the date when the enlargement began. It subsided somewhat under treatment, but he again came to him about a year ago. This time not only was the joint enlarged, but there was a large fluid tumor extending down from the joint to the ankle. He hesitated in forming his diagnosis, and for diagnostic purposes, as well as to prevent the rupture of the sac, he drew off four or five ounces of a thick, albuminous fluid. The question of amputation suggested itself, but he could not then recommend it. Three days later, he drew off more than half a gallon of the same fluid from the bursal cavity, and aspirated also the cavity of the joint. He then washed out the cavities, and in order to determine whether or not a communication existed between the two cavities he injected a weak solution of carmine into the upper opening, with the result that he found it in the lower sac a few minutes after. Two weeks later the knee refilled, but the sac did not. He then withdrew the fluid, washed out the cavity, and applied a plaster dressing, and the trouble did not recur for some time. After about six months, he returned for treatment, with the fluid again in the joint. In addition to this, there was an abnormal mobility of the joint, and the limb was smaller than the other, and after the fluid had been again removed there was some roughness of the joint. He believed the case one not simply of an enlargement and distention of the joint and bursa, but one in which there was a hernial protrusion of the bursa of the gastrocnemius muscle, The walls of the capsule had been softened and weakened by pressure until they yielded. Allusion was then made to the six bursæ found in relation with the knee-joint, and their positions described. Reference was made to the literature of the subject, and a short description given of several important cases. The difficulty of making a correct diagnosis was also referred to. As for treatment, aspiration, the tincture of iodine, the splint, and perfect rest of the joint, were all that could be used, except such measures as the general condition of the patient would require.

DR. BENJAMIN LEE, of Philadelphia, did not believe the mere finding of colored fluid in the lower sac after it had been injected into the upper, sufficient evidence of a communication between the two. It might have passed by osmosis.

DR. PREWITT replied that the colored fluid was found too quickly to admit of that explanation.

The papers of Dr. Edmund Andrews, of Illinois, on *Painless Incision by an Instrument Advancing with a Slow, Imperceptible Motion;* of Dr. J. C. Hutchison, of Brooklyn, on *Transfusion;* of Dr. Schuppert, of Louisiana, *Urethrotomia Lithotriptica;* and of Dr. Quimby, of New Jersey, entitled, *Alcohol a Narcotic Irritant, and therefore not a True Stimulant*, were read by title, and referred.

DR. E. H. BRADFORD, of Massachusetts, presented

AN INSTRUMENT FOR THE TREATMENT OF OBSTINATE CASES OF CLUB-FOOT,

by which, after division of the tendon, and, in some cases, of the plantar fascia, the foot was brought straight and retained in that position. The instrument consisted of a flat plate on which the foot rested, and to which three or four braces were attached by binding-screws, supporting-rods, by turning which, pads were brought against different parts of the deformed foot, and with proper adjustment the deformity relieved. The inventor stated that the foot could be brought into proper position in a few minutes by gradual tightening of the screws, without inflicting much pain.

DR. PREWITT reported the cure of a case of club-foot in a young lady of twenty, by division of the tendo Achillis and plantar fascia, with subsequent manipulation. He said that on account of the unquestionable deformity of the bones which occurred in these cases, he

could not believe it possible to rectify a case of long standing at one sitting.

DR. BRADFORD replied that he had once performed a tarsotomy as recommended by German surgeons, and that he was then convinced that the deformity was not so much in the bones as in the ligaments and the fibrous tissue about the joints.

DR. QUIMBY did not agree with the last speaker, because he had *seen* the bones deformed.

DR. GILL believed the greater part of the deformity was not in the bones.

DR. B. LEE, of Philadelphia, believed that the lecturer had introduced the correct plan of treatment. He had used a method somewhat similar in effect to this one with good results. He believed the instrument a good one, but would be afraid of the inflammation that might result from too hasty restoration of the deformity.

DR. HENRY O. MARCY, of Boston, read a paper upon

THE RELATION OF BACTERIA TO SURGICAL LESIONS,

in which he gave a careful review of the evidences upon which the belief of the deleterious effects of germs upon wounds, and through them upon the general organism, was founded. The discussion of what constitutes a poison to wounds was entered upon, and the various exposures to which open wounds were liable.

The most important indication in wound treatment is to secure an aseptic condition, which may be defined as a wound surgically clean. Experimental proof is constantly accumulating to show that the inflammatory and other changes which ensue in wounds, are with few exceptions the result of the vital activity of new organisms. There is abundant evidence to show at least the extreme probability that septicæmia and pyæmia are one and the same disease, and that their sole and invariable cause is due to micrococcus poisoning.

DR. G. L. PORTER, of Connecticut, read a paper on

AN UNRECOGNIZED DANGER IN SURGICAL PRACTICE—ENTRANCE OF AIR AS A SECONDARY COMPLICATION.

The sad experience of surgeons, and the experiments of investigators, have made familiar the usual symptoms of the dangerous, and often fatal, accident of the introduction of atmospheric air into the venous circulation.

The report made by Beauchesne, in 1818, of the death, within a half hour, resulting from the entrance of air through the rupture of the internal jugular, was followed by many others, until they now number nearly a hundred. At first, the danger-zone was thought to be limited to the venous pulse in the regions of the neck, but the rapidly accumulating reports of deaths elsewhere from the entrance of air has extended the field of danger. The majority of modern instances are from the entrance of air into the uterine sinuses, either after local injections, deliveries, or attempted criminal abortions. A short time since, after sudden death in suspicious circumstances, I found a punctured wound of the internal os opening into the uterus, separation of four inches of the decidua vera and the uterine walls crepitant and distended with air. Death within ten minutes.

Hitherto this danger has been considered only as an immediate complication of a surgical operation. The following case illustrates the unclassified danger that may be developed many days after an injury in a vein of small size, and comparatively remote from the heart:

Above the right temple, one inch above eyebrow, one inch from median line, a contused wound nearly two inches long extending upwards and outwards, penetrated to the bone and denuded the periosteum. Considerable hemorrhage for two days, finally stopped by domestic applications. On the fifth day, first seen by the doctor, who found the patient in a squalid room, suffering from well-marked trismus, equally severe on both sides; wound unhealthy, inflamed, and gaping. Appropriate treatment relieved the symptoms, and reduced the local inflammation. Upon the ninth day, trismic spasms returned; at 3 o'clock A. M., tenth day, there was a severe clonic convulsion, and shortly afterwards she was found gasping for breath, and coughing up a thick tenacious mucus. Nitrite of amyl gave speedy relief. Three hours later, she had a second convulsion, in which she died. Examination twenty-six hours after death: Wound open, pus at bottom of external angle. No decomposition of body. Abdominal organs healthy and normal. While sawing calvaria, frothy blood bubbled through a small opening. Bubbles of air in small vessels of brain—a spumous fluid in sinuses. The right cavities of heart, and the descending and ascending cavæ filled with the same mixture of air and blood—a spumous fluid, the left side of heart containing fluid blood unmixed with bubbles of air. Congestion of posterior portion of lungs; anterior normal.

Death was caused by air in the venous circulation, entering through divided or injured branches of the frontal or temporal veins, stretched and held open by the trismus. The first convulsion occurred when the air—gradually entering through a small opening—had over-burdened the heart and lungs; the comparatively small amount of air had formed with a portion of the blood a spumous fluid, which had been churned back into the veins, allowing the rest of the blood remaining fluid to pass on into the general circulation, and sustain life, until the air, constantly increasing in amount, had vitiated so much blood as to cause the second convulsion, and destroy life.

The following objections were raised and answered. Death could not have resulted from air in the veins because: 1. Injury was outside of the danger-zone. 2. Long time after original injury. 3. Small size of vein. 4. Absence of noise of entering air. 5. Questionable liability of the spontaneous generation of air in the circulation. 6. The instance is without a reported counterpart. The knowledge of the possibility of such an entrance of air suggests to every surgeon the preventive means of carefully closing and protecting the wound, and the remedial measures to combat the danger should its characteristic symptoms occur.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

Sixth Annual Congress, held in New York, May 12, 13, and 14, 1884.

(Specially reported for THE MEDICAL NEWS.)

WEDNESDAY, MAY 14TH—FINAL SESSION.

BY a common agreement, the morning and afternoon sessions were joined into one.

A paper on *Herpes Laryngis*, by DR. S. H. CHAPMAN, of New Haven, was read by title.

DR. T. A. DEBLOIS, of Boston, then reported some

CASES OF BUCCAL TUBERCULOSIS.

This affection, he said, was sufficiently rare to deserve mention whenever it was met with, either where the tubercular deposit first showed itself in the mouth or where, after manifesting its presence in other parts of the body, it finally extended itself into that region. He did not believe there was any good reason to doubt that tubercles always existed in the lungs before they appeared either in the pharynx or the larynx, and he was fully prepared to admit the same in regard to tuberculosis of the mouth. He had met with two cases of the latter affection, and both of them speedily proved fatal. Having related these cases in detail, with the results of the autopsies, he again called attention to the very bad prognosis, and then gave a *résumé* of the literature of the subject.

A paper on *Goitre*, by DR. WILLIAM PORTER, of St. Louis, was read by title.

DR. C. E. SAJOUS, of Philadelphia, then read a paper on

HAY FEVER AND ITS SUCCESSFUL TREATMENT.

His conclusions were as follows:

First. There is an idiosyncrasy existing in certain individuals to become influenced by certain emanations or irritating substances.

Second. The idiosyncrasy is accompanied by a chronic hyperæsthesia of that part of the nasal mucous membrane covering the inferior and middle turbinated bones, the middle meatus, the floor of the nose and that part of the septum between the limits of the olfactory membrane.

Third. Organic alteration of these parts annuls that hyperæsthesia; preventing at the same time what symptoms the patient may be liable to in case of an access.

Fourth. Any destructive agent will induce that organic alteration, but the galvano-cautery is by far the best; being painless, effective, and devoid of all danger when used in practised hands.

Fifth. In order to obtain a satisfactory result, a sufficient number of applications must be made, covering the entire extent of the hypersensitive surface; without which the result will be doubtful.

Until after he had completed this paper, Dr. Sajous said, he had been entirely unacquainted with the labors of Dr. Roe in the same direction, as set forth in the papers which he had read before the Medical Society of the State of New York in 1883 and 1884; in which he claimed that the essential subjective cause of hay fever was found in the nasal passages, having been induced by disease, either latent or active; that the objective cause of the irritation of this tissue was mainly pollen; that a cure could be effected by the destruction of the nerve-filaments and enlarged vessels of the part; and that the latter could most satisfactorily be accomplished by the galvano-cautery. If he could not be the first, therefore, Dr. Sajous continued, he was glad to be a good second in this matter, and he felt gratified that his conclusions had been confirmed by the more extensive experience of Dr. Roe, who had commenced his present plan of treatment as long ago as 1879, and therefore anticipated him by two years.

DR. E. L. SHURLEY said that he had employed the galvano-cautery with success in one neuralgic case and in two cases of hay fever; but instead of singeing the whole surface, he had limited the applications to special points where nerve-filaments originated.

DR. BOSWORTH said that he hoped that in the discussion the matter of permanent effect would be given consideration. He should like to know how long the results achieved had continued.

DR. SHURLEY said that in the only case of his upon which any conclusions could be based the patient had remained entirely free from trouble for eighteen months.

DR. J. O. ROE said that he was very glad, indeed, to have the results of his investigations so fully confirmed by the entirely independent ones of Dr. Sajous. As far as the permanency of the case was concerned, patients upon whom he had operated as long ago as 1879 had remained entirely free from all signs of hay fever up to the present time, and the only case among all that he had treated in which there had been any return at all of the trouble (and this was in a greatly modified form) was one in which he found that there was a small portion of hypersensitive tissue still remaining which he had inadvertently overlooked at the time that he made the galvano-cautery applications. This partial failure, therefore, was due not to any inadequacy of the method of treatment, but simply to his own want of care in practising it; and it only went to confirm his established conviction that the completeness and permanency of the cure depended on the thoroughness with which the treatment was carried out. In regard to the diagnosis, there was a simple procedure which he thought was of the greatest possible utility. This was touching the mucous membrane of the parts alluded to with the point of a probe, when an attack of asthma or other symptoms characteristic of an acute onset of the hay fever trouble would instantly be brought on. It was thus in the power of the operator to test whether his treatment had been thorough or not; for if, after he had applied the galvano-cautery to all the parts which seemed to be implicated, he touched the mucous membrane in different positions and found that no reflex irritation was set up, he could rest assured that the cure would be complete. On the other hand, if such irritation was set up, it would be necessary to apply the cautery to such portions of tissue as showed the presence of this hyperæsthesia. Some cases were undoubtedly due (though this was certainly not true of all, as claimed by Dr. Harrison Allen) to obstruction of the nose and hypertrophy. In these it was necessary to destroy the hypertrophied tissue, and to be particularly careful to remove any projecting spiculæ of bone (if such there were) which might prove a source of irritation. All the passages should be rendered entirely free, so that if a slight amount of swelling of the mucous membrane should occur, as from cold, it need give rise to no trouble. In many cases, however, in individuals who did not suffer from hay fever, there was found much more extensive obstruction and hypertrophy than in those who were the subjects of it. This went to show, therefore, as Dr. Sajous claimed, that there must be a certain idiosyncrasy in the individual before he would be liable to the affection.

DR. J. N. MACKENZIE, of Baltimore, remarked that what the essential anatomical condition in hay fever was he would not pretend to say, but he felt sure that there

was, at all events, an abnormal excitability of the reflex nerve-centres. In one case which he had seen, the most terrible paroxysms occurred in connection with the menstrual periods, which it was wholly impossible to prevent or modify, while paroxysms coming on at other times the patient was able to control by stopping up the nostrils. As to the excitation of the paroxysms by *ab extra* causes, he did not, for a moment, believe that pollen, for instance, was the essential cause of the trouble, as a rule, although in some instances it might perhaps be. Many patients suffered from attacks of hay fever at times of the year when they could not possibly have been excited by pollen. In order that this affection should occur, he believed that there must be, first, a predisposition, either inherited or acquired; and, second (for the production of the paroxysm), an engorgement of the nasal mucous membrane, particularly that covering the inferior turbinated bone and the septum. To the theory of nasal obstruction, advanced by Harrison Allen, he could not subscribe. As regards treatment, he coincided with Drs. Roe and Sajous, that the best plan was to destroy the membrane of the area mentioned, no matter what the nerve-centres concerned in the trouble might be. By this means a part of the mechanism by which the disease was produced was abolished, and this was all that was necessary to put a stop to it. In concluding, he said that he would like again to lay special stress on the importance of the excitability of the nervous centres as a factor in the causation of hay fever.

DR. BEVERLY ROBINSON, of New York, said that he had applied pure carbolic acid to the parts of the nasal mucous membrane referred to, with a very considerable degree of success. To the adoption of this method he had been led almost by accident, as on one occasion a lady suffering from a violent attack of hay asthma, to which she had been subject for many years, had suddenly applied to him in the emergency, and, happening to have the carbolic acid at hand at the moment, it occurred to him that it might perhaps be of service to try its effect. The result in this case had been so successful that he had been induced to treat others in the same way, and it had seemed to answer quite well.

DR. ROE said that he could not agree with Dr. Mackenzie in regard to the part played by pollen in the causation of hay fever, as he thought it was a most important one. If the affection were not in some measure due to pollen, we should have it occurring at any time, while in fact the recurrences of the trouble were as regular as clockwork, and many patients could predict the precise day on which the attack would commence. This, he had not the slightest doubt, was because the ripening of plants occurred with such regularity every year, the paroxysms of hay fever being always coincident. The pollen theory seemed, therefore, to be a well-established one.

DR. MACKENZIE said that he thought, on the other hand, the attacks were just as bad in winter as at other times of the year, and hence could not be attributed to the irritation of pollen. They seemed to him to be associated to a great extent with meteorological conditions; and there were many sources of irritation besides pollen that would give rise to an attack, such as dust and exposure to cold in various ways. In regard to recurrence of the affection at a given day and hour each year, he believed that it was due in many instances purely to the imagination.

DR. ROE said, in reply to Dr. Mackenzie, that it was a mistake to suppose that patients were not liable to the irritable effect of pollen in winter, as the latter might be in the air in some places at any period of the year, thus, he had known persons to be attacked with hay fever in the middle of winter after going into barns where hay was stored.

DR. S. JOHNSTON, of Baltimore, said that he himself was a subject of this affection, and that in his case the attacks always came on regularly on the 28th of August. By remaining in town and avoiding dust, however, he could get along comparatively comfortable while they lasted. He always suffered intensely, however, from railroad travel during the attack. Last summer he went away in the midst of it, feeling in pretty good condition when he left home; but when he reached Washington he suffered from a terrific paroxysm. From there he went up into the Alleghany Mountains, and as soon as he reached them all trouble instantly vanished. As long as he remained there he was perfectly free from it; but as soon as he got back to Washington he was again attacked. In his own case he had derived most relief from chloroform, eucalyptol, and the insufflation of one-sixth of a grain of morphia in solution. He thought the affection was undoubtedly due to an exciting element, combined with some neurosis.

THE PRESIDENT expressed the opinion that in every case of hay fever there were three essential elements, viz.: (1) A neurotic. (2) A structural (in the nasal cavities). (3) A sensitive (sensitiveness to pollen, dust, or other source of irritation). If any one of these factors were removed, the case would be cured; and it was perfectly immaterial which element was eliminated. Thus, he knew of one case which was completely cured by the patient's overcoming an inherited neurotic tendency by means of a systematic course of hygienic measures undertaken for this special purpose. The combination of all the three elements was essential for the existence of the affection.

DR. SAJOUS closed the discussion. He said that in advocating the theory of special idiosyncrasy he did not wish, by any means, to ignore that of reflex centres. Practically they were one and the same thing. The exposed surface in every case was the nasal mucous membrane, but if there were no hyperæsthesia here, there might be in other parts of the body, as the vagina, for instance. The hyperæsthetic condition of the nose was particularly sensitive to pollen, and, therefore, the latter was one of the most common exciting causes, and dust was very apt to act in the same way in the case of those who were not affected by pollen. The point made by Dr. Roe in regard to diagnosis and the assurance of a cure by the probe-test, he thought a very admirable one, and he would certainly always avail himself of its advantages in the future.

DR. E. L. SHURLEY, of Detroit, read a paper on

THE COMPARATIVE VALUE OF THE GALVANO-CAUTERY IN DISEASES OF THE NASAL AND PHARYNGEAL CAVITIES,

the aim of which, he said, was to consider (1) the conditions necessitating the use of this or some other similar agent; (2) the comparative value of this and others; (3) the intelligent application of the galvano-cautery.

Having referred to the physiological functions of the nasal passages as the vestibule of the respiratory apparatus, he said that he found that the importance of these was too often lost sight of. In cold climates, it was especially necessary that the nasal mucous membrane should be filled with blood, in order to warm sufficiently the air as it passed over it. In any case in which nasal hypertrophy existed, the first thing to find out was whether this condition was permanent or only temporary; and, if it was permanent, whether the hypertrophy was sufficient to give rise to local and general disturbances. If this was found to be the case, it was necessary to destroy a portion of the hypertrophied tissue; but he strongly advised that as little as possible should be destroyed, as he thought the tendency of the present day was to destroy too much. Cicatricial tissue was always a disadvantage, and if there were too much of it, progressive chronic pharyngo-laryngitis would eventuate.

In speaking of destructive agents, he mentioned, first, mechanical instruments, such as the knife, scissors, and forceps. The forceps, he thought, tore and destroyed an unnecessarily large amount of tissue, and was also very painful. In tumors, the use of the wire snare was much preferable; but in dealing with exuberant mucous membrane, it had not proved efficient in his hands. In regard to chemical agents, he said that when used in a cautious manner, they did not destroy a sufficient quantity of tissue, and, if they were used more freely, they were apt to set up too much irritation.

He preferred to use the galvano-cautery in the conditions under consideration. It possessed the merit of precision, thus enabling the operator to touch with facility the exact spot that he wished, and avoid doing injury to the surrounding parts. The reaction in the adjacent tissues resembled normal vitality more closely than that secured by any other agent. Another great advantage was its painlessness, which allowed plenty of time for operating with deliberation. He had formerly employed Byrne's battery, which served the purpose required quite well, but of late had confined himself to the use of an ordinary thermo-electric pile of zinc and carbon—such as he now exhibited to the Association—which was cheap and always ready, while it furnished all the electric force necessary. In operations with the galvano-cautery about the pharynx, he advised that the soft palate should always be held forward. In conclusion, he urged two points: (1) to injure or destroy as little tissue as possible; and (2) to cut through the neoplasm as narrow a tract as will suffice.

DR. W. C. JARVIS, of New York, said that he did not believe any means were so precise as the use of the wire and needle, which he had recommended, and which, he regretted to say, were not employed to as great an extent as he had anticipated. No other method, he thought, was so efficient. Pharyngitis sicca had been referred to in the paper as likely to result from the presence of cicatricial tissue; but in all the cases in which he had used the needle, he had yet to see the first one in which this condition had resulted. At the same time, he agreed with Dr. Shurley that too much tissue was often removed. This point seemed to him an additional recommendation for the use of the needle, after which such a result was scarcely likely to follow.

DR. SEGUIN said that he had used the snare a great deal, and had never known the dry condition to occur after it. A much better result could be obtained with the needle in the anterior turbinated tissue than by any other means. He was constantly in the practice of using the galvano-cautery also, and in many conditions it constituted the best method of treatment.

DR. ROE thought that the galvano-cautery was very useful, but also contended that it should be employed with great caution. In cases in which it was applicable, nothing else was so efficient—as, for instance, in hay fever, in which no other agent would answer the same purpose. Different operators, however, were liable to go to extremes in the advocacy and employment of special methods which they had found to be of service.

DR. BOSWORTH said that American laryngologists had long labored under a load of precedent which had been brought from the other side, but they were beginning to be more independent of this, and were now in reality doing better work in various departments of laryngology than was being done in Europe.

DR. MACKENZIE said that there was no warmer advocate of the use of the snare than himself, but, at the same time, in many cases he thought it was inappropriate. In posterior hypertrophy it was often impossible to operate successfully with the snare, and here the galvano-cautery could be used with good effect, while for complete destruction of erectile tissue there was nothing so efficient as this. In anterior hypertrophy of the turbinated bone, in which there was an anginose condition, it was also of the greatest possible service, and in granular pharyngitis he agreed with Dr. Shurley that it was the treatment of all others.

DR. SHURLEY, in closing the discussion, said that he was free to confess that his failures with the snare and needle were probably due not to the instrument, but to his own lack of skill in using it. Some men got into the way of using special agents with peculiar skill and effect, and this Dr. Jarvis had undoubtedly done in the case of his own instruments; but he thought that others who had not attained this special skill might do much harm with them. In his own earlier practice he was convinced that he had been in the habit of destroying too much tissue with the galvano-cautery, as well as the snare; but this was an error which his later experience had taught him to avoid. In conclusion, he said that when a highly vascular condition was to be treated, there was no method with which he was acquainted by which the amount of tissue to be destroyed could be so nicely regulated as that by the galvano-cautery.

DR. BEVERLY ROBINSON, of New York, then read

A CONTRIBUTION TO THE STUDY OF ADENOID VEGETATIONS AT THE VAULT OF THE PHARYNX.

He said that he did not propose to go into a consideration of the whole subject of adenoid vegetations, but merely to relate some of the results of his own experience in regard to it, and especially in the matter of treatment, which differed from that of Meyer and some other European observers, and of Drs. Bosworth and Swinburne in this country. In the large throat clinics with which he was connected, as well as in private practice, he had met this condition less frequently than the authors referred to; so that, judging from his experience, he could say that it was rare in New York.

After giving a number of statistics in reference to the subject, he related a case which had been under his care at St. Luke's Hospital. The patient was a young, single woman, twenty-four years of age, who, one year before admission, began to be troubled with naso-pharyngeal catarrh. On examination, it was seen that there was a polypus in the right nasal fossa, and in the larynx; the left arytenoid cartilage was found to be congested, while there was an adenoid growth at the vault of the pharynx. This was about the size and shape of an ordinary chestnut, and was removed by Bosworth's modification of Jarvis's snare. There were still some adenoid vegetations left, however, and these were scraped away by means of a Thomas uterine curette. He had yet to meet a case in which the pressure of adenoid growths over the pharyngeal orifice of the Eustachian tube caused deafness, as was so often claimed by other observers. In a case of his own, in which there was considerable deafness, with deviated septum, nasal obstruction, and adenoid growth of the pharynx, the deafness was entirely confined to the ear on the opposite side from that on which the lesions were located. That in twenty-seven out of forty-two cases of adenoid vegetations which Swinburne had reported, there was one affected; and in fourteen of these, perforation of one or both *membranæ tympani* occurred. This frequency certainly did not agree with his experience, and he thought it must be that Dr. Swinburne and he did not agree as to the exact condition to which the name of adenoid vegetations was applied. Voss and other authors had also written of the frequency of the complication of aural complications. He took exception to the considering of follicular pharyngitis as of an adenoid character, although it was true that this condition often existed in connection with adenoid growths. He had not found that the latter were as prone to bleed on being touched as some had represented. In regard to the question of heredity, he agreed with Meyer, that there was this tendency about such vegetations.

In his treatment he had employed Meyer's method with some success, but in sessile growths he had never effected a permanent cure, although he had removed as much tissue as he deemed justifiable. Other cutting operations had never impressed him with much confidence in their efficiency. When cutting instruments were used, however, he thought they should always be guided by the finger, or else with the aid of the rhinoscopic mirror. When this could not be employed, Thomas's blunt wire uterine curette was probably the best instrument to use, as no injury could be inflicted by it on the surrounding parts. A few days afterward it was advisable to make an application of nitrate of silver, or the galvano-cautery. In general, in cases in which Meyer's method could not be used, the galvano-cautery constituted the best means of treatment. It was particularly adapted to sessile growths; while Jarvis's plan was the best for pedunculated growths. In operating for this condition he had not found it necessary to give ether to adults or adolescents. Except in very rare instances, he would employ the galvano-cautery in the case of children, preferring the use of the snare or knife. Having specified some of the details which were of advantage in operating with the galvano-cautery, he remarked that he had yet to see a single case in which inflammation of the middle ear followed its use.

DEAFNESS DEPENDING ON DISEASE OF THE MIDDLE EAR.

DR. S. W. LANGMAID, of Boston, related a case of deafness, believed to be due to non-suppurating disease of the middle ear, and to be permanent, which was completely cured by the removal of an adenoid growth extending from the orifice of one Eustachian tube to that of the other.

DR. MACKENZIE said that he knew of no class of cases in which more brilliant results could be obtained by operative procedures than where deafness depending on disease of the middle ear, which was due to the presence of adenoid growths of the pharynx, was cured by the removal of the latter. These cases, he had found, are exceedingly common among children. The growths were papillomatous, as a rule, and could be snipped off with the forceps. It was his practice to fix one blade of the forceps and use the other as a curette, when, if any of the adenoid tissue remained, he applied strong alcohol to it. It had been debated by some whether such growths should be removed in children or not; but there was no question in his mind as to the desirability of this. If the child were permitted to grow up with them, irremediable changes were liable to occur which would result in permanent deafness. The neglect to interfere in such cases was, therefore, a positive cruelty to the child. He laid special stress on this point, because he believed the condition under consideration to be a frequent cause of deafness in children. As to the etiology of the affection, in the vast majority of instances in his experience it had been due to some local trouble in the vault of the pharynx, usually resulting from one of the febrile diseases of childhood, and the most common of all was diphtheria. The ready bleeding of these growths he considered diagnostic, and hence when a child was presented to him suffering from deafness, and he found that bleeding resulted from the introduction of the finger into the pharynx, he had not the slightest hesitation in pronouncing the case to be one of adenoid vegetations. He consequently differed from Dr. Robinson in his opinion on this point, as well as in regard to the frequency of the affection.

DR. ROE said that he agreed with Dr. Mackenzie that bleeding from touching the pharynx was diagnostic of these growths. He was in the habit of removing them with the forceps.

DR. ASCH coincided with Dr. Robinson as regards the comparative infrequency of the condition, In two large throat-clinics with which he had long been connected, it was surprising how few cases of it were met with. The fact was, however, that patients with adenoid vegetations of the pharynx, as a rule, suffered from very little difficulty. There was some alteration of the voice, perhaps, but it was not of the marked character described by Meyer, of Copenhagen. He had not found it necessary to use the galvano-cautery in this condition.

DR. JARVIS remarked that he had always felt a prejudice against the use of the forceps. The principle of the instrument was a vicious one, and it seemed to him a savage kind of treatment to grasp and tear the tissues in the dark. About three weeks before, there had come to him a patient suffering from carcinoma who had been under the care of another physician, who had removed a portion of the growth with the snare and then used the forceps to remove more of it. Although

he was a skilful operator, the patient had suffered the most excruciating agony during the operation, and the parts had been much mutilated; a long strip of mucous membrane still hanging down into the pharynx when Dr. Jarvis saw him. Dr. Jarvis used a snare with the curette suggested Dr. Bosworth, and removed all the remaining portion of the growth without occasioning the patient any pain. He said that in operating in many cases it was desirable that the soft palate should be held up out of the way by means of a rubber loop.

DR. ROBINSON, in closing the discussion, said that the more he examined throats the less disposed he was to interfere (except in perhaps a very mild way), unless there was no doubt of there being trouble specially due to local conditions present. In half the number of cases operated on, he believed that no good was accomplished and positive harm was often done; and the point which he wished to emphasize particularly in his paper was, that the galvano-cautery, snare, and other violent measures in fifty cases out of a hundred were really of no use.

DR. LOUIS ELSBERG read a paper on

SPASM OF THE GLOTTIS.

This, he said, had been prepared at the special request of the President. Our knowledge of the subject was comparatively recent. The affection in the child had only been recognized within the last two hundred years, and in the adult it was still involved in much confusion, as was indicated by such terms as laryngeal chorea, laryngeal epilepsy, etc., which he trusted would soon be dropped forever from medical literature. The definition was, the spasmodic contraction of one or more of the laryngeal muscles. It might be unilateral (though he had never seen an instance of this), or bilateral, and it might be simple or complicated (with the spasm of other muscles). Again, it might occur in the domain of the superior or inferior laryngeal nerve. There were three varieties, (1) expiratory (including phonatory), (2) inspiratory, and (3) deglutitory. Having given a list of the various synonyms of spasm of the glottis, he passed on to the etiology, and spoke first of the predisposing causes. The most important of these was morbidly increased irritability of the nervous system, and it was on this account that age had so much to do with its causation. The affection was most frequently seen between the fourth and twenty-fourth months of life; but it was a mistake to regard it exclusively as a disease of childhood. In the matter of sex, boys were more subject to it than girls, but in adult life women suffered from it more frequently than men. Heredity had some influence in the etiology, and the general condition played a most important part in this regard. Thus it was most frequently met with in children badly nourished and living in unwholesome and badly ventilated rooms, while among the well-to-do classes it occurred oftener in hand-fed than in nursing infants. It not infrequently came on at the time of weaning, and rachitic children were particularly subject to it. Hydrocephalus and microcephalus also predisposed to it. Enlargement of the thyroid body had been formerly supposed to be the only cause of it, but it had now been shown that it was not a cause at all, although it was quite frequently present in cases in which it occurred. Among the other causes mentioned were hysteria, injuries (especially from food or drink getting into the larynx), catarrhal inflammation of the respiratory mucous membrane, gastric irritation, and emotions, such as anger or fright. In one of his adult patients the trouble was brought on by going up in a high swing, and in a young girl, who suffered from expiratory adductor spasm, it was due to enlarged tonsils.

Then taking up the diagnosis and symptoms, he said that the latter differed according to the set of muscles affected. In abductor spasm there was insufficient closure of the rima glottidis. Dr. J. Solis Cohen had related a case at the present meeting. Adductor spasm was of several varieties: 1. The deglutitory. After swallowing, there was more or less suffocative narrowing of the rima glottidis. The attack lasted less than a minute, and, until the next one came on, the patient could swallow with impunity. Dr. Elsberg had seen one very marked case, however, in which complete spasm of all the abductor laryngeal muscles continued for a week, and the patient was threatened with starvation.

2. Inspiratory. There was closure of the *rima glottidis*, and the trouble might be mistaken for paralysis, which, however, might coexist.

3. In the simple phonatory form there were no symptoms unless the patient attempted to use the voice, when it would be found that the voice had a choked sound; but if phonatory efforts were persisted in, dyspnœa would result.

4. In the simple expiratory form, the attack came on if the patient attempted to whisper, as well as to speak or sing. Nothnagel reported a case in which the spasm was excited by the attempt to blow out a candle; while others had been noted in which the attack was brought on by coughing, and in others, again, by laughing.

5. The complicated expiratory form, or "curious cough." There are two subdivisions of this:

a. As to the mode. The spasm was paroxysmal or continuing. The hacks were not so severe as the cough in the continued form, while they observed a certain rhythm. Both were usually absent during sleep. Chorea was sometimes observed in connection with the trouble, and it was this variety which had afforded the pretext for the characterization of the spasm as "laryngeal chorea," which was, however, a term that could not be too strongly condemned.

b. As to the acoustic quality. This was often very peculiar; the sound might be of a barking, quacking, crowing, or lowing kind; was apt to be very loud and discordant.

6. The complicated inspiratory form. This was the most common and dangerous, and was that ordinarily known as laryngismus stridulus. For a correct and graphic description of this, Dr. Elsberg referred his hearers to the work of Morell Mackenzie, which he said he regretted that he had not the time to quote.

In regard to the prognosis, Dr. Elsberg quoted from the statements which he made last year, and also from Mackenzie, who said that the longer the period of intermission between the attacks, the greater the chance of recovery. The treatment required great promptitude, sometimes operative skill, and always good judgment. In some of the forms of adductor spasm the finger should always be thrust into the throat, to see whether or not the epiglottis was impacted. Catheterization of the trachea was preferable to the performance of tracheotomy as a rule. Time would not permit him to dwell

further upon the treatment; but the ordinary means for relaxing spasm would occur to all.

DR. E. FLETCHER INGALS inquired what sized catheter Dr. Elsberg would use.

DR. JARVIS spoke in reference to laryngeal growths as being a cause of spasm, and said that he had sometimes observed the tendency to spasm remaining after such growths had been removed.

DR. J. O. ROE had seen quite a number of cases, which never failed to yield to the inhalation of chloroform. One quite remarkable case had been under his care in which the spasm was due to congestion of the arytenoid cartilage. The patient was not able to swallow solids at all, and only at certain times could swallow liquids. By treating the local condition the tendency to spasm was gradually overcome; but it was a long time before the patient acquired sufficient confidence in his ability to swallow solids to attempt it.

DR. ELSBERG said that on account of the pressure for time his reference to the treatment had been very meagre. In regard to the point of Dr. Jarvis, the latter had not seemed to notice that he spoke of hyperæsthesia of the larynx as liable to induce spasm. The case which Dr. Roe had related answered typically and perfectly to one of deglutitory adductor spasm which he had himself met with. Chloroform he thought was excellent as a rule, except in the case of children, in whom he regarded it as particularly dangerous. In regard to the size of the catheter to be used in the trachea, this would depend altogether on age and size of the patient. The catheters which he employed were the hard rubber ones of Shroetter; and, like the tracheotomy tubes that he used, were of six different sizes. The outside diameter of No. 1, was one-sixth of an inch; of No. 2, one-fifth of an inch; of No. 3, one-fourth of an inch; of No. 4, one-third of an inch; of No. 5, between one-third and one-half of an inch; and of No. 6 (the largest he ever used), half an inch. From birth to the age of one year he used No. 1; when the patient was from 1 to 3 years, No. 2; from 3 to 7 years, No. 3; from 7 to 15 years, No. 4; in women and small men, No. 5; and in large-sized men, No. 6.

The officers were then elected for the ensuing year, as previously reported, and the new President, Dr. Shurley, made a few suitable remarks on taking the Chair. The selection of the time and place of the next annual meeting was left to the Council.

The Association then adjourned.

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Thirty-fifth Annnal Session, held at Philadelphia, May 14, 15, and 16, 1884.

(Specially reported for THE MEDICAL NEWS.)

THURSDAY, MAY 15TH—SECOND DAY.

MORNING SESSION.

THE TREASURER'S REPORT

was presented and showed a balance of $2451.65.

THE ADDRESS IN MEDICINE

was then delivered by DR. W. H. DALY, of Alleghany County. The researches of Koch and Pasteur were reviewed somewhat cynically. The practical results, he thought, had been *nil*, so far as the saving of life was concerned. The recent good results in surgery, he thought, were due rather to cleanliness than to antisepsis. He recommended clinical observations in preference to theoretical researches, and cited the discovery of vaccination as one of the triumphs of clinical study.

DR. E. A. WOOD, of Alleghany, thought that the results of the investigations of Koch and Pasteur should not be disparaged. He thought that Jenner's discovery was rather accidental, while those of Pasteur were scientific deductions, and that true scientific education should always be encouraged.

DR. C. W. DULLES, of Philadelphia, read a paper on

DISORDERS MISTAKEN FOR HYDROPHOBIA.

After calling attention to a previous paper, in which he had suggested the need for an attitude of more careful criticism, and for a fuller acquaintance with the methods by which the true nature of cases of supposed hydrophobia should be tested, the author took up this matter more in detail. He deprecated the common habit of diagnosticating hydrophobia from the symptom of an aversion to drinking. This, he said, is not a characteristic symptom, for it is by no means always present in hydrophobia, and it is often present in other disorders. Yet, unfortunately, it is such a striking phenomenon that it leads observers to overlook other indications which, if properly estimated, would lead to the discovery of the real cause of the trouble. Admitting that all physicians are aware, in a general way, that there is a simulated hydrophobia, they do not know this with precision enough. The cases of this kind are called lyssaphobia, or spurious hydrophobia, but they are not assigned to their several classes as they should be. Even treatises on hydrophobia do not give any adequate idea of the great number of diseases in which hydrophobia may arise as a symptom. To meet this want the present paper has been undertaken.

Dr. Dulles divided the disorders which may simulate hydrophobia into: 1. Disorders of the alimentary canal. 2. Disorders of the respiratory apparatus. 3. Disorders of the circulatory apparatus. 4. Systemic disorders. 5. Disorders of the nervous system.

In inflammations of the fauces, which have been somewhat vaguely classed as angina and cynanche, the difficulty of swallowing has frequently led to symptoms usually considered peculiar to hydrophobia. In such cases, especially when the sufferer is a child or a nervous person, the very importance attached to the act of drinking heightens the disorder, and tends to make it present more and more the picture of hydrophobia.

He next took up the difficulty of swallowing which accompanies inflammations of the œsophagus. After this he referred to that which may arise in inflammations and irritations of the stomach and intestines. The disorders of the respiratory apparatus discussed were the cynanches or anginas before alluded to, then inflammations of the larynx and trachea. Functional and organic diseases of the heart next came under review. Of the systemic diseases in which hydrophobia may be simulated the first considered was rheumatic fever. Uræmia was next spoken of and attention was called to the significance of the assertion that the presence of albumen in the urine is a symptom of hydrophobia. A case was given in which a child twelve and a half years

old, treated for hydrophobia with doses of one-tenth grain of atropia, had "one-third albumen" in the urine. It was also stated that one of the cases from which Dr. Gowers obtained the specimens for his well-known description of the microscopical lesions of the brain and spinal cord in hydrophobia, was probably a case of nephritis. Other less easily classified systemic disorders, which may have symptoms like those of hydrophobia, were then taken up. Of these were various fevers, Dr. Rush being cited as classing hydrophobia as a malignant fever. Several cases in which hydrophobia was intermittent were mentioned, and an article by Dr. Dumas, in which an intermittent fever simulated hydrophobia. The effect of mercurialization as a cause of the symptoms of hydrophobia was then spoken of, and the claim made that some of the older notions as to the nature and course of this disorder may have come from confounding its phenomena with those of mercurial poisoning. In concluding this division of the subject, the occurrence of hydrophobia in pregnancy was alluded to.

Of the disorders of the nervous system, meningitis was first taken up, and dismissed briefly, as being too well understood to need argument. Next it was stated that apoplexy might, in certain of its forms, present symptoms seen in hydrophobia. The same was said to be true of hydrocephalus, and tumors of the brain. Turning to diseases of the brain, which have a more obscure pathology, the author dwelt at some length on the similarity between the symptoms of hydrophobia and those of acute mania. Tetanus was then considered. In this connection the author indulged in a slight digression to deny that the hydrophobia could be attributed to anything "specific" in the saliva of a mad dog, since it was proved that the same effects were produced by the bites of dogs not rabid, and of men, and by a variety of traumatisms.

The simulation of hydrophobia by epilepsy was then discussed, and illustrated. Afterwards hysteria and various psychical states were compared with hydrophobia. This part of the discussion was illustrated with a number of interesting cases. Last of all, the writer spoke of the production of the symptoms of hydrophobia by a variety of narcotic poisons, all of which have been frequently used in the treatment of this disorder. He also intimated that sometimes patients were hastened to their death by the unwise solicitude and management of their physician.

It is the opinion of Dr. Dulles, that the true nature of hydrophobia will never be understood until, as a first step, physicians learn the importance, when called to what seems to be a case of this kind, of rigidly excluding the possibility of the phenomena being due to some other and better understood disorder. To this end he deems it necessary that it should be much better known and remembered what a variety of other disorders may simulate hydrophobia. He does not claim for the present study completeness in its own field, but hopes that it may suggest a line of investigation which, if generally and carefully followed up, will lead to something more creditable to our age than the present ignorance in regard to both the nature and treatment of what is called hydrophobia.

DR. TRAILL GREEN, of Easton, thought there was a great deal of error on the subject. He had seen but one rabid dog, and had never seen a case of rabies humana.

DR. ARTHUR VAN HARLINGEN, of Philadelphia, then read a paper entitled

THE PRINCIPLES OF EXTERNAL TREATMENT IN DISEASES OF THE SKIN.

The employment of outward applications in the treatment of diseases of the skin has always been largely empirical; a remedy having been chosen in a given case, not with the object of producing a certain desired effect in a known condition of the skin, but because it had been said to be useful in the disease supposed to be present. This "doctrine of specifics" was so prevalent some years ago that but four remedies were commonly employed in skin diseases, namely, mercury, arsenic, sulphur, and oxide of zinc. A disease was either eczema, when arsenic and oxide of zinc ointment was the specific; or it was the itch, when sulphur was to be made use of; or it was syphilis, when mercury was to be employed.

It had occurred to the author that if the more commonly used external remedies could be classified according to their effects upon the diseased integument, certain principles of treatment might be arrived at, which would enable the physician to treat most forms of skin disease according to the appearances presented, without this necessarily involving a knowledge of the nomenclature and classification of dermatology.

He then went on to sketch out a scheme by which the various outward applications commonly employed were arranged according to their effect, as protectives, sedatives, astringents, anæsthetics, stimulants, caustics, and mechanical means of treatment, giving under each head the effects of each class of applications, together with a list of individual medicaments belonging to the class.

The paper was put forth with the hope of suggesting lines of treatment which might aid the general practitioner in the management of the skin diseases encountered in every-day experience.

DR. J. H. MUSSER, of Philadelphia, presented a *Modification of the Sphygmograph; being a change in the Base of the Instrument of Pond.*

DR. J. V. SHOEMAKER then made some remarks on *Jequirity; its Use in Diseases of the Skin.*

DR. J. B. POTSDAMER, of Philadelphia, then read a paper on

BRONCHITIS AND PNEUMONIA OF RHEUMATIC ORIGIN.

The anatomical seat of this disease, he said, is in the white fibrous tissue of the bronchi, which is inflamed. It does not affect the mucous membrane primarily. Pneumomia is always secondary to rheumatic bronchitis, and may occur in the same lung. Proper rheumatic treatment will often save the patient. Further, it bears a direct relation to rheumatism and rheumatic endocarditis. The prognosis is favorable, provided the disease is recognized early, otherwise the pneumonic process may go on and the patient succumb or the lung may break down and the patient eventually dies of consumption.

The treatment is the same as is indicated in rheumatic affections elsewhere. Salicylic acid and its salts, or phosphate of ammonia, being given when uric acid and urates are found in the urine, and lemon juice when phosphates are present.

DR. TRAILL GREEN, of Easton, followed with a *Plea*

for Chemistry, which he was led to make by seeing some dangerous prescriptions in medical journals.

AFTERNOON SESSION.

DR. JACOB PRICE, of West Chester, delivered the

ADDRESS IN OBSTETRICS.

He recognized two forms of vomiting of pregnancy. One the slight form, the other "pernicious vomiting." The latter was dangerous in proportion to the time elapsing between impregnation and vomiting. The shorter the time the greater the danger. Pernicious vomiting was always connected with inflammation, congestion, or ulceration of the cervix uteri, or a combination of these. The treatment is by rest and local application of iodine, carbolic acid, and tannin.

The removal of the secundines in early abortion, by instruments, was decried. A tampon would serve as a plug to stop bleeding, when the placenta would be cast off. Forcible dilatation of the cervix was condemned. The danger of post-partum hemorrhage was to be avoided by administering ergot immediately after delivery, and maintaining ergotism for at least twelve hours. Venesection was the best remedy in puerperal convulsions, and thorough antiseptic treatment, including vaginal injections, was advised in puerperal fever.

DR. J. A. MCFERRAN, of Phila., then read a paper on

OBSTETRICAL FORCEPS JOINTED AT THE JUNCTION OF THE BLADES AND SHANKS.

If the forceps hold the head in an unfavorable position, it must continue as it is held if the chin has departed from the chest, thereby lengthening the diameter; there is no possibility of producing flexion to shorten it; if traction be made, there must be unnecessary resistance, and consequent injury. With the forceps fixed to the head, the centre of motion is at the junction of the head and neck, and any flexion possible with the forceps amounts to but little, on account of the short distance between the arch of the pubes and the perineum, and the head swinging in a smaller arc than the handles. The head being fixed, the line of traction must be direct from the point where the force is applied to the point of resistance. No curves in the forceps can avoid this. This direct line is in an oblique direction, approaching more or less the planes of the pelvis, consequently the head is pulled hard against the pubic side, thereby necessitating greater force, the excess being spent upon the tissues of the mother and corresponding parts of the child. Dr. A. H. Smith being fully aware of this difficulty, and the dangerous pressure it subjects the parts to, professes to avoid it by making a lever of the forceps, using one hand close to the vulva as a fulcrum, and making traction at the same time. Dr. McFerran believed his mode of traction to be the best that can be used with the ordinary forceps; still he is fully convinced that it falls far short of producing the desired result. The head is not free, and the force backwards is spent upon the junction of the head and neck, which, if effective at all, would cause extension of the head and would bring trouble in one direction in attempting to avoid it in another. If the perineum and os coccygeus were out of the way, by holding the head back it might be swept out of the pelvis in the manner proposed; still, the other inconveniences would remain.

Traction must be made in an oblique direction, be the shape of the instrument what it may. Admitting that it is evident that the desire to avoid the perineum will cause us to elevate the hands more or less, we thereby depart from the axis of the pelvis, sometimes so far as to lock the head between opposing points; and even when this does not happen, there is a demand for greater traction which involves consequent unnecessary injury. Most of the injuries arising from the use of the forceps arise from pressure, and the mere termination of a labor by delivery is no evidence that injury has not been done. Skill may often avoid much of it, but there is a certain portion that no amount of skill can prevent.

As pressure causes most of the injury, an instrument that causes but little pressure beyond that which necessarily belongs to the case, is the one that should be used. With these facts in view, Dr. McFerran designed a pair of forceps in the fall of 1877, jointed at the junction of the blades and shanks. He has fully tested them on several occasions after the failure to deliver with other forceps, and always with perfect and quick success, and he can now, with a confidence which experience alone can give, urge a trial of this instrument.

It does not require an expert to use this instrument. Anyone capable of making a correct diagnosis in a case need have no hesitation in resorting to it. The complicated combination of ideas in regard to the diameters of the pelvis, and corresponding ones of the child's head, need not confuse the operator. He only needs to know the anatomy of the pelvis and the ordinary size of a child's head. When once the forceps is applied to the head, it is free to deflect, flex, or extend. The line of traction is transferred from the junction of the head and neck to the joint of the instrument. By making the handles a lever and one hand the fulcrum, placed close to the vulva, the head can be flexed and swept down in the axis of the pelvis, and even when traction is made from the extremity of the handles, the joint leaves the head free to deflect and pass an obstruction with the greatest possible ease.

DR. MARY H. STINSON, of Montgomery County, read a paper on *The Work of Woman Physicians in Asia.*

DR. BENJAMIN LEE, of Philadelphia, then read a paper on *Massage; the latest Handmaid of Medicine;* and DR. L. B. KLINE, of Columbia County, followed with a paper on *Diphtheria.*

DR. H. C. WOOD having been invited to make some remarks as to his views on

DIPHTHERIA,

said that during the last three or four years Dr. Henry Formad and himself have been occupying their leisure time with investigations into this subject. In the first place, they attempted to impart the disease to the lower animals. They found that when they took material from an ordinary diphtheria, as it prevails in Philadelphia, they failed; but when they obtained material from the malignant epidemic, they succeeded almost invariably in infecting the lower animals. The symptoms were identical with those occurring in man. There were local pseudo-membrane, systemic infection, and death, with the symptoms of blood-poisoning, and the production of a material which was infectious when passed from animal to animal.

They did not attempt to pass it from animal to man.

But nature has done this. Thus, in a Belgian epidemic, a child inoculated some calves in a dairy; the disease was diagnosticated diphtheria and treated as diphtheria, and some of the attendants took diphtheria while swabbing out the throats of the animals. There can be no doubt that it is possible for diphtheria to be transmitted from the lower animals. He is cognizant of cases in which he believes children took diphtheria from cats.

Drs. Wood and Formad took the diphtheritic membrane, soaked it in water, filtered it through clay by pressure, and the filtrate, consisting of liquid but no solid matter, was found to be innocuous. The solid portion left was very poisonous, and did produce diphtheria. They also availed themselves of a natural filter. As is known, the membrane is filled with a micrococcus, a form of vegetable plant, and the urine of a patient with malignant diphtheria swarms with this germ. They found that if pieces of blotting paper were soaked in this urine, they became more virulent than the membrane itself. This seems to prove that the micrococcus is the cause of the disease. They further took the micrococcus and cultivated it away from the body in soups, and they produced diphtheria with micrococci of the fourth or fifth generation; at least, they were unable to distinguish the disease produced from diphtheria. Here, however, is an objection. They found in ordinary saliva a micrococcus or plant which cannot be distinguished from the micrococcus of the most malignant diphtheria; they were, as far as could be discovered, identical, and in everybody's mouth. They noted that there was a grade in the poisoning power. The micrococcus from a sound throat produced no poisoning, and the severity of the poison was directly as the virulence of the epidemic from which the poison was taken. The micrococcus from ordinary throats failed to grow in culture-fluids. From mild diphtheria there was slight power to grow, while from the virulent it grew rapidly. The membrane exposed to the air gradually lost its poisoning power; when it had lost its poisoning power, the micrococcus no longer grew. Dr. Wood thinks that these researches prove that diphtheria is produced by micrococci that are present in every mouth. It fails to produce diphtheria because it is in an inert condition. This will explain the great controversy which has swept over the profession in regard to contagiousness, and the question whether pseudo-membranous croup is the same as diphtheria.

We know there is a mild and virulent form of diphtheria. A child gets an ordinary catarrhal sore throat. Under the stimulus of a plentiful supply of food, the micrococcus begins to grow. At first there is a simple sore throat, but the micrococcus becomes more and more abundant, or, in other words, the inert plant becomes active and there is produced a genuine diphtheria. In other cases micrococci take on the active state outside of the body, and there is generated an epidemic of malignant diphtheria. A child who has developed diphtheria in itself, throws off some of this diphtheritic poison in an active condition, and you have contagious diphtheria. They found that undoubtedly in the majority of cases the disease is local. They injected the diphtheritic poison directly into the blood, but unless there was a local lodgement, there was no diphtheria. They also traced the mode of entrance into the system. The micrococcus first locates upon the mucous membrane and begins to grow, and inflammation surrounds it. The membrane becomes filled with micrococci, these force their way between the epithelial cells, the cells begin to die, and ulceration takes place; the mouths of the lymphatics open and the micrococci pass in. Hence it is that so early in diphtheria the glands of the neck begin to swell. Early you find no micrococci in the blood, but after the constitutional symptoms have become severe, masses of micrococci will be found in the vessels, and the plant invades the white blood-corpuscles. After a time the white blood-corpuscles will be filled with them, and micrococci will be found everywhere present. They are found in the kidney, filling up the capillaries, forcing their way between the muscular fibres of the heart and all over the body, leading everywhere to the destruction of tissue. They also found something which will throw light upon deaths occurring in many instances, and which leads to the conclusion that diphtheria is not a specific disease at all, and it shows that physicians of forty years ago were right, and observed clinically what we are now demonstrating scientifically. Diphtheria is nothing more than a putrid sore throat, a septic sore throat. We took matter from puerperal metritis, from sloughing sores, from gangrenous wounds swarming with micrococci, not distinguishable from those of diphtheria. These we put in animals and got diphtheria.

When they examined the blood in malignant scarlatina they also found this micrococcus. They could prognosticate almost certainly the fate of the patient by noting whether the micrococci were in the white blood-corpuscle or not. A case of scarlet fever seems to be getting better, the original poison has spent itself, but the sore throat which has been produced has caused a condition of debility, the micrococcus has passed into the blood, and the child has perished from secondary septicæmia. Dr. Wood is sure the time will come when it will be recognized that often such a patient does not die from the original disease, but that the original disease has so weakened the vital forces that the system is unable to resist this septic organism which is always about us, and will ever remain with us.

DR. BENJAMIN LEE, of Philadelphia, exhibited

A NEW SPLINT FOR HIP-JOINT DISEASE.

A bar jointed at the hip-joint allowing motion in both antero-posterior and lateral directions. It is provided with a rachet, by means of which extension may be made. It is not attached to the shoe, but has provision for adhesive strips which hold it firmly to the foot. Counter-extension is made by a perineal band. He presented a case which he had first seen in the third stage, and requested that a committee of three be appointed to examine the result of the treatment with the new splint. Drs. Allis, Willard, and Pollard, were appointed as the committee. They afterward reported that, with the exception of being unable to flex his leg beyond a right angle, the patient was in perfect condition.

MEDICAL DIPLOMAS.

DR. JACKSON, of West Chester, offered the following:

Resolved, That a committee of seven be appointed to consider the best method of making a diploma, which permits a man to practise medicine in Pennsylvania, an evidence of real worth. Adopted.

EVENING SESSION.

DR. HENRY H. SMITH delivered

THE PRESIDENT'S ADDRESS,

taking for his theme *The Importance and Usefulness of Scientific Medical Organizations to our Profession and the Public*, and he noted their origin and elementary formation, as described in history; showed in what manner our annual meetings are useful to the profession and the public; and alluded to the reciprocal obligations of the public to the profession.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, April 22, 1884.

THE VICE-PRESIDENT, CHARLES MCBURNEY, M.D., IN THE CHAIR.

COMBINED ŒSOPHAGOTOMY.

DR. SANDS exhibited a specimen of stricture of the œsophagus, removed from the body of a child upon whom he had performed the operation of combined œsophagotomy with a fatal result.

The patient was a girl, two years of age, who was admitted into the Roosevelt Hospital, on January 10, 1884, on account of a cicatricial contraction of the œsophagus, which had followed the accidental swallowing of a small quantity of boiling lye, ten months previously. Considerable inflammation was caused by the action of the caustic fluid, and easy deglutition was never reëstablished. Two months after the accident, the child was extremely weak and emaciated, but by the careful administration of liquid food, consisting of milk and raw eggs, her condition was greatly improved.

Treatment by dilatation was commenced in October, 1883, but was soon afterwards relinquished as impracticable. When admitted into the hospital, she was etherized and carefully examined. Nothing abnormal could be discovered by inspection of the pharynx, or by introducing the forefinger, the tip of which passed below the level of the cricoid cartilage without detecting any constriction. Exploration with elastic urethral bougies, however, revealed the presence of an œsophageal stricture, admitting a bougie two millimetres in diameter, which was felt to be firmly grasped. Larger instruments were arrested at the orifice of the stricture, which was situated at a point thirteen centimetres from the central incisor, and presumably just below the upper edge of the sternum. Considerable sickness and nervous depression followed the administration of ether, and the subsequent attempts to dilate the stricture were made without the use of an anæsthetic. These trials were made at intervals of from one to three days, except during a period of a week, when mechanical treatment was suspended on account of a sharp attack of diarrhœa, which rapidly reduced the patient's strength.

Her weight, which, at the time of her admission, was 22 lbs. 13 oz., fluctuated during the following two months, and once diminished more than two pounds in the course of a week. At the end of two months, however, she had gained 1 lb. 7 oz. Meanwhile, in spite of persevering attempts at dilatation, the stricture had become more narrow, and at last impassable.

Soon after this, treatment was commenced, a bougie three millimetres in diameter was inserted through the stricture and into the stomach; at a later period, smaller instruments had to be employed, and these seemed to cause an aggravation of the dysphagia. Three days before the operation, deglutition ceased, and the child's condition became critical. Dr. Sands decided to resort to combined œsophagotomy, which he performed on March 11th, in the following manner. Ether was administered, and the patient's head was extended and rotated toward the right side, a wine-bottle, wrapped in a towel, being placed under the neck, in order to favor extension, as the neck was very short. An incision, extending from the level of the left sterno-clavicular articulation to that of the middle of the thyroid cartilage, was made along the groove between the windpipe and the sterno-mastoid muscle. The inner edge of the latter being exposed, the muscle, together with the carotid sheath and its contents, was drawn outward by a blunt retractor, while the omo-hyoid muscle was detached and held upward. The dissection was then continued in the direction of the œsophagus, being carried along the outer edge of the thyroid gland and tracheal muscles. On dividing the deep fascia, previously held up and rendered tense by a couple of toothed forceps, the œsophagus was readily uncovered, when it was found to be dilated and hypertrophied. It was opened by cutting with a scalpel between two forceps, an elastic catheter having been previously introduced through the mouth. The catheter was then withdrawn; and, the margins of the œsophageal wound being held apart by loops of silk, exploration by means of bougies revealed a tight stricture, situated two centimetres below the episternal notch. After several trials, this was passed by a filiform silver probe, two-thirds of a millimetre in diameter. On withdrawing the probe, it was found possible to introduce a narrow, grooved director, along which a slender probe-pointed eye-knife, such as is employed in slitting up the tear duct, was guided to the orifice of the stricture, where two shallow incisions were made, one being directed forward and toward the right, and the other forward and toward the left. Neither incision exceeded half a centimetre in length, and very little resistance was offered to the knife. No hemorrhage followed, and when the knife was withdrawn, it was found possible to introduce an elastic catheter four millimetres in diameter, which was tied in the wound, the latter being covered with a dressing of iodoform gauze. The operation was almost free from hemorrhage, and neither of the thyroid arteries was divided.

March 11.—11 P.M. Child very restless and weak. Four ounces of milk injected through tube into stomach.

12th.—8.30 A.M. Temp. 103.5°; pulse 135; respiration 38. Patient has passed a bad night, and has failed to rally. Injected milk ℥iv, brandy ℥j. During the day a small quantity of milk and brandy was injected every hour, with the occasional addition of a drop of laudanum. At 6 P.M. temp. 104.8°; pulse 180; respiration 48.

13th.—Patient continued to sink during night, and died at 4 A.M.

Autopsy.—Twelve hours post mortem. The œsophagus was found to be the seat of an indurated tubular stricture, three centimetres in length, the upper end of which was nine centimetres above the cardiac orifice. The œsophageal wall corresponding to the stricture varied in thickness from three and a half to four millimetres, the calibre being four millimetres in diameter.

Above the stricture the œsophagus was dilated to a calibre of fifteen millimetres in diameter, while below the diameter was eleven millimetres. Above the stricture the œsophageal wall was thickened to the extent of two millimetres and a half; below it measured one millimetre and a half. The effects of the action of the caustic were visible throughout the entire length of the œsophagus, the mucous membrane being in many places opaque, white, thickened, and adherent to the muscular coat. Of the two incisions made at the entrance of the stricture at the time of the operation only one had left a trace; this was found to be about four millimetres in length, and extremely shallow, hardly extending beyond the mucous membrane. The peri-œsophageal tissues at the seat of stricture were healthy and uninjured, and no lesions beside those described were found in the thoracic or abdominal organs. An examination of the specimen showed how slight an incision would sometimes suffice to render permeable a stricture which had hitherto proved impassable; and it was greatly to be regretted that the patient had not sufficient strength to survive the shock of the operation, from which she never rallied.

Dr. Sands also presented a second specimen of stricture of the œsophagus, obtained post mortem from a boy thirteen years old, who died from peritonitis following gastrostomy, and upon whom an unsuccessful attempt had been made to perform combined œsophagotomy. The patient entered the Roosevelt Hospital on February 14, 1884, when he gave the following history: About six months previously he was submerged in a vat containing a solution of caustic soda. The injury was severe, causing numerous ulcers of the skin, loss of sight in both eyes, and a stricture of the œsophagus. Soon after the accident the mucous membrane of the mouth began to desquamate, and a week elapsed before he could swallow liquids. A fortnight later he was able to swallow solid food, although deglutition was painful. Three months before admission dysphagia reappeared, and gradually increased until nothing but liquid could be swallowed. Lately, treatment by dilatation had been resorted to, but without benefit. When admitted he weighed seventy-five pounds, and was pale and thin. Examination of the œsophagus discovered a stricture, through which no instrument could be made to pass, situated eleven inches from the central incisors, and nearly opposite the middle of the sternum. On the following day a filiform whalebone bougie was introduced through the stricture and beyond it as far as the stomach. Dilatation was carefully tried nearly every day during the next four weeks, but without success. On one occasion, soon after commencing treatment, the stricture admitted a flexible catheter, three millimetres in diameter. Usually only smaller instruments could be passed, or the stricture was found to be impassable. By careful feeding the patient's weight increased six pounds; it afterwards diminished slightly as deglutition became more difficult.

18th.—Operation—ether. Head extended, rotated to the right, and supported by a hard, round pillow placed beneath the neck. Incision three inches in length, extending from the level of the middle of the thyroid cartilage, to a point opposite the sterno-clavicular articulation. Inner edge of sterno-mastoid exposed, and omo-hyoid divided, to obtain more room. Superior thyroid artery divided between two ligatures. Œsophagus exposed, and opened after being raised by two forceps—a flexable catheter having been previously introduced through the mouth. Margins of wound in œsophagus held apart by loops of silk, while attempts were made to pass the stricture, which was situated three inches below the episternal notch. All these attempts proved unavailing, as no instrument could be made to engage in the stricture, whether inserted through the mouth or through the œsophageal wound. Silver and whalebone probes, including the finest, and elastic and filiform bougies were tried in turn, without success. Oil was injected into the œsophagus, and an endoscopic tube was passed down to the seat of stricture, in the hope of rendering it permeable, but in vain. The wound was irrigated with bichloride solution and dressed with iodoform gauze; the edges of the œsophageal incision having been previously stitched to the integument, with the view of permitting subsequent exploration.

21st.—Patient fed, since last date, by rectal enemata, and is in fair condition. Stricture still remains impermeable to instruments inserted through the wound, although, yesterday it permitted the passage of a fine whalebone bougie (tip 5 F., shaft 8 F.) introduced through the mouth. It was decided to perform gastrostomy. Operation—ether. Incision an inch and a half long, parallel to, and a finger breadth below the inferior margin of the thorax on left side. Outer border of the rectus was divided to the extent of three-eighths of an inch. Bleeding having ceased, the peritoneum was divided and the forefinger passed into the abdominal cavity readily recognizing the anterior wall of stomach. This being drawn forward, was held in position by a loop of stout silk thread, embracing the peritoneal and muscular coats. The stomach was fastened to the abdominal wall by thirteen interrupted silk sutures, introduced through the entire thickness of the latter, but not penetrating the gastric mucous membrane. The operation performed with antiseptic precautions. Irrigation with solution of mercuric bichloride, 1 to 2000. Silk sutures, prepared according to Kocher's method; iodoform gauze dressing. Patient not being very weak, it was decided to postpone opening the stomach so as to favor adhesion. Nutrient enemeta (Tenbe's beef extract) with a tablespoonful of whiskey every four to six hours.

24th.—Surface of wound in the neck looks gray and sloughy. Patient seems to be losing strength. 9 P. M. Removed dressing from abdomen and found wound apparently in excellent condition. Opened the stomach with a tenotomy knife, making very small wound, equal only to width of blade. First attempts to puncture were unsuccessful, the knife passing between the coats of the stomach and not penetrating its cavity. Introduced into stomach a piece of soft rubber catheter, No. 16 F., which filled the aperture completely, and prevented, at the time, leakage of gastric fluids. The puncture, made without ether, caused no pain. A catheter was tied in position and plugged by a wooden peg. Iodoform dressing removed. Four ounces of milk were injected into the stomach every four hours. Rectal enemata continued every six hours.

26th.—Neck wound in bad condition. Applied carbolized oil (1 to 12) and iodoform.

27th.—Abdominal wound looks badly, most of the

stitches having cut through, and the granulations being bathed in secretions which have escaped from the stomach alongside the tube. Inserted a large flexible catheter, No. 19 F., and packed the wound carefully with iodoform gauze. Patient receives by the stomach three raw eggs daily, and eight ounces of milk every four hours.

28th.—Weaker; slight pain in abdomen; no tympanites; wound in neck continues sloughing, and emits a foul odor. Applied solution of chloride of zinc, 40 gr. ad ℥j.

30th.—Died at 11.55 A.M., having failed steadily, and developed symptoms of peritonitis since last date. Elevation of temperature, 101° to 105° was observed from the time of the first operation.

Post-mortem examination showed an indurated stricture of the œsophagus at the point where it had been discovered during life. It measured about eight millimetres in length, and the thickness of the œsophageal wall corresponding to it was four millimetres. The entire mucous membrane of the œsophagus was blanched, thickened, opaque, and adherent. A bougie three millimetres in diameter could be passed without difficulty through the stricture, just above which the mucous membrane was somewhat uneven and abraded, as if it had been injured by the instruments employed in attempting dilatation. No false passage existed, and the tissues surrounding the œsophagus were normal.

The peritoneal cavity contained a small amount of sero-purulent fluid, and the coils of small intestine were adherent to one another by recent lymph. The adhesions between the stomach and the abdominal wall at the seat of the artificial opening, had partly given way, and the evidences of peritonitis were most marked in this neighborhood. The point at which the stomach had been perforated was situated six centimetres from the pylorus. There was no evidence that the stitches had penetrated the gastric mucous membrane.

Dr. Sands was at a loss to explain his failure to pass the stricture at the time when he opened the œsophagus; but the swelling of the mucous membrane, its uneven surface above the contracted orifice, and the lateral position of the wound in the œsophagus, suggested themselves as possible obstacles to success. He regretted his failure, especially in view of the limited extent of the stricture, which was well adapted for cure by internal division. He was inclined to attribute the fatal result of gastrostomy to the low vitality of the patient, which was illustrated not only by a lack of reparative action in the abdominal wound, but also by the unfavorable condition of the wound of the neck. Perhaps, if the final step of the operation had been deferred until a later period, a better chance might have been afforded for firm adhesion between the stomach and the abdominal wall, but the increasing weakness of the patient seemed to indicate that further delay would probably cause death from inanition.

DR. MCBURNEY referred to a case which he saw about a year ago, occurring in a lady who had had prescribed for her aromatic spirits of ammonia. There was also standing near the bottle another bottle of the same size and shape which contained caustic ammonia, and one night she accidentally took a tablespoonful of the caustic ammonia solution which gave her very great discomfort at the time, but no bad result whatever followed except the destruction of the mucous membrane of the tongue and inside of the cheeks. He supposed the absence of serious results was due in part, at least, to the fact that only a few minutes before she swallowed the caustic ammonia she had taken a considerable quantity of milk.

DR. POST referred to a case in which the patient accidentally swallowed a teaspoonful of ammonia, which occasioned great distress for a time, but from which he ultimately recovered.

DR. YALE referred to two cases in which each of the patients had swallowed a drachm of aqua ammonia without discomfort.

DR. SANDS referred to the case of a jeweler who swallowed a mouthful of nitric acid, and died two or three days after admission to the hospital. At the autopsy it was found that the œsophagus for its entire length, and a large part of the stomach, were in a state of gangrene, the slough being quite deep and involving at least the entire mucous membrane. The mucous membrane in the neighborhood of the laryngeal aperture was thickened, but not sufficiently so to cause death from suffocation. The patient also had broncho-pneumonia in both lungs.

DR. MARKOE said he was inclined to think that the efforts made by Dr. Sands in his case, as he had opportunity to witness them, could not have done any mischief in the way of seriously bruising or otherwise injuring the mucous membrane of the œsophagus. He based this opinion partly on the fact that the manipulation was very carefully performed, and partly on the fact that the mucous membrane of the œsophagus does not easily receive injury. He was still more of this opinion in view of a case in which he operated for the removal of a foreign body, in which the forceps were introduced from the mouth, passed down on two successive occasions, and also a number of other instruments, large and small, were introduced, and the foreign body was seized several times and subjected to traction, with an amount of force which he feared had inflicted considerable injury, but at the autopsy no trace of the operation could be seen. At the time that Dr. Sands was operating he was inclined to the opinion that more force could have been used safely.

DR. SANDS remarked that his idea was that the use of the whalebone bougie which was used for several weeks early in the case had possibly diminished the calibre of the stricture.

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 1, 1884.

THE VICE-PRESIDENT, HORACE T. HANKS, M.D., IN THE CHAIR.

DR. MARY PUTNAM JACOBI read a paper entitled

SOME CONSIDERATIONS ON ENDOMETRITIS,

the main idea of which was that the greater cycle belonging to the uterus—pregnancy, was precisely analogous in its characteristics to the lesser cycle of the organ—menstruation, and that endometritis was always the result of subinvolution occurring in consequence of the inadequate completion of one or of the other of these cycles. Among the propositions that the writer advanced were the following: The endometrium is the

essential part of the utero-ovarian system. The homology of the two cycles of menstruation and pregnancy, as regards the part played by the endometrium, is complete. In either, if the characteristic products resulting from the physiological process are not fully absorbed, subinvolution ensues. Subinvolution, whether dependent on menstruation or pregnancy, is apt, sooner or later, to result in chronic endometritis. Parenchymatous metritis always depends upon antecedent disease of the mucous membrane. Nearly all utero-ovarian disease may also be traced to the germinal membrane of the endometrium. Ovaritis may be regarded as always secondary to fundal endometritis. The same is true, as a rule, of uterine flexions and versions. The cervix may be primarily affected. With the exception of the development of neoplasms, subinvolution is always the cause of endometritis. The utero-ovarian disease is a result of a deviation of the process of growth. The ultimate aim of treatment must be the restoration of the menstrual cycle to its integrity, and for both the success and safety of the means of treatment it is essential to take into consideration the rhythmical element of the cyclical process.

It is very important to recognize the beginning of trouble, and, thus, slight catarrh becomes a matter of great significance. To study endometritis with advantage, it is requisite to understand the factors concerned in it, and the *modus operandi* of their action. It is a recognized fact that tissues of the highest function are the first to become affected in any pathological process, and hence it is the endometrium that is first implicated in the course of utero-ovarian disease. The development of the parenchymatous changes is comparable to the greater cycle, pregnancy.

After alluding to the peculiarities of the vascular supply, she offered the hypothesis that the accumulation of blood in the periuterine and ovarian plexus of veins causes new growths of the normal mucous membrane of the uterus, when, if impregnation of the ovum took place, the decidua vera becomes formed. If not, the endometrium grows, until it fills the cavity of the organ, when it is arrested by pressure; in consequence of which, also, the capillaries rupture, and the hyperæmic condition is removed. By pressure, too, the further growth of the venous plexus is arrested.

Thus, there is a successive hypertrophy of the endometrium, precisely similar to that of the ovarian cortex; and the endometrium and vesicular membrane of the ovary are physiologically united in the most intimate manner. Endometritis, it is true, is not always accompanied by ovarian disease; but it is extremely rare that the latter exists without concomitant endometritis. The reproductive tissues, she claimed, fulfil no function, and, instead of being an advantage to the general system, are the reverse, and require to be repressed; so that there is a constant antagonism between the system at large and the utero-embryonic element. There are three essentials for normal hemorrhage: First, the complete emptying of the venous reservoir; second, the prompt evacuation of the vessels of the endometrium; and, third, that no distention of the uterine veins should remain. If these conditions are not fulfilled, a venous hyperæmia will remain, and when the next cycle of growth commences, thickening of the membrane will occur, because a portion of the new growth incident to the menstrual cycle still remains. From a succession of such processes, chronic endometritis of the catarrhal, vegetative, or other type, will eventually result. Three symptoms were stated to be pathognomonic of endometritis, viz.: First, excessive pain on the passage of a probe into the uterine cavity; second, hyperæmia, as indicated by the hemorrhage resulting from the introduction of the probe; and, third, sensitiveness of the fundus to abdominal pressure. Dysmenorrhœa is a so usually present, especially if the os internum is closed. The existence of such a thing as ovarian dysmenorrhœa, was denied by the writer, who claimed that the pain resulting from ovarian disease reaches its maximum during the week preceding menstruation, and is relieved when the flow came on.

In the treatment of endometritis, it is of paramount importance to recognize the rhythmic character of the uterine function, and the limits of danger, it was believed, are not sufficiently defined. For two weeks before the occurrence of menstruation, the writer held, it is best not to make any intrauterine application, as she considered that after the close of the first week following the menstrual flow, the danger of exciting periuterine inflammation commences.

One of the important results of endometritis is flexion of the uterus, which is caused primarily by softening of the stem of the organ. The uterus is surrounded by a mass of fibro-muscular structure similar to its own, and, indeed, of which its parenchyma is only a more condensed portion. Now the special characteristic of this kind of tissue is the tendency to contract, and, hence, when the uterine stem becomes softened, as the result of endometritis, anteflexion or anteversion may be caused by the contraction of the round ligaments. Retroflexion, on the other hand, is the result of a paresis, the essential prerequisite for which is relaxation of the round ligaments. With retroversion there is also relaxation of the utero-sacral ligaments. Prolapsus depends on total relaxation of all the uterine ligaments.

The essentials of any efficient treatment of chronic endometritis are the destruction of the new products resulting from the continued duration, from the normal process in the menstrual cycle, and the restoration of that normal process. In the first place, therefore, whatever would tend to raise the arterial tension throughout the system, and especially in the pelvic tissues, is of service, and among the agencies of this class mentioned were hydro-therapeutics, counter-irritation, faradization, gymnastics, and the health-lift. Secondly. Local treatment of the coexistent endocervicitis is required. The dissipation of the hyperæmia of the cervix might have such an effect on the endometrium that it would not be necessary to make local applications to that. Thirdly, direct applications to the endometrium. In regard to the propriety and value of such applications a violent controversy has been excited, and different authorities have lauded special agents. The good effects of this procedure in suitable cases, and when properly carried out are, first, destruction of the abnormal growth accumulated; second, contraction of the parenchyma through reflex nerve action; third, compression of the bloodvessels; and, fourth, the moderation of the growth during the succeeding menstrual cycle. The

dangers of intrauterine applications were stated to be: first, the production of uterine cramps; second, the implication of the periglandular lymphatic spaces; third, the production of periuterine inflammation; and, fourth, the propagation of inflammatory trouble to the ovaries. The strong mineral acids, particularly nitric and chromic, are preferred by the writer, as a rule, and it is frequently necessary to dilate the uterine canal by means of tents. Every application to the endometrium is to be regarded in the light of a surgical application, and it should always be made at the home of the patient, who should remain in bed for three days, if a tent has been employed, and for one day, if not. If the application has done good, its benefit will be manifested in the diminution of the leucorrhœa, and in the abatement of the pains in the back and hips; while the next menstruation will be less painful. Intrauterine applications should never be made unless the patient suffers from some form of dysmenorrhœa.

DR. MUNDÉ thought that it was of the utmost importance to commence the treatment early, since the longer the case progresses the more difficult it is to cure, and the more liability there is to have it complicated with pelvic cellulitis or peritonitis. When the latter conditions are present it is essential, if a cure was to be made, to cure the coexisting endometritis on which they depended; but at the same lime it is not to be forgotten that there is always danger of intrauterine applications setting up additional periuterine inflammation. He differed from the author of the paper in the opinion that parametritis is principally dependent on endometritis at the fundus, as in his own experience he has found it much more frequently associated with disease of the cervix, and he believed that this is due mainly to the fact that the lymphatic connection is more close with the cervix than with the fundus. The same facts are true in reference to ovaritis; so that he is always afraid to treat disease of the cervix if the ovaries are affected.

TEXAS STATE MEDICAL ASSOCIATION.

Sixteenth Annual Meeting, held in Belton, Texas, April 22, 23, 24, and 25, 1884.

(Specially reported for THE MEDICAL NEWS.)

THE Association convened in the Belton Opera House, and was called to order at 10 A.M., April 22d, by THE PRESIDENT, DR. A. P. BROWN, of Jefferson.

THE PRESIDENT, in some well-timed remarks, urged that it was the duty of the State to regulate the practice of medicine and surgery. He advocated the organization of a library and museum for the Association, and advocated a National pharmacopœia authorized by the General Government. Upon all these subjects committees were appointed to consider, and report such action as would be to the best interest of the people and the profession.

DR. R. W. PARK, of Waco, in the evening delivered a learned address on *Evolution*.

THE PRESIDENT delivered his

ANNUAL ADDRESS

on the second day, giving a graphic *résumé* of the work of the fathers of medicine, showing the honor due them and the exalted position we now occupy as a result of such a foundation of facts in science.

DR. R. M. SWEARINGEN delivered an eulogy on the life and death of

DR. T. D. MANNING,

who sacrificed his life at Holly Springs during the epidemic of yellow fever in that city.

DR. T. H. NOTT, of Goliad, made some remarks upon the life of

DR. J. MARION SIMS,

and offered appropriate resolutions. On motion, $100 were donated to the Sims memorial fund.

A resolution adhering to

THE CODE OF ETHICS

of the American Medical Association, and approving the course of the New York physicians in severing from the State society and organizing an association in sympathy with the American Medical Association was unanimously adopted.

Bills regulating the practice of medicine and organizing a State Board of Health were presented and discussed and referred to the Committee on Legislation.

In the Sections, thirty-five papers were presented.

DR. J. M. WILLIS read the report of a special committee on

THE MINERAL WATERS OF TEXAS,

giving the results of his investigations and inquiries in reference to some of them, notably Wooten's Wells, of Robertson County; Sulphur Springs, of Hopkins County; Lampasas Springs, of Lampasas County; McGregor Springs, Palo Pinto Springs, Sour Wells, and Sour Lake. All of these waters were more or less valuable for various chronic diseases.

DR. C. M. TRUEHEART, of Galveston, reported a case of

PERIOSTEUM GRAFTING,

in which he removed the periosteum from a dog and transferred it to a man, with the result of the development of three and a half inches of the clavicle.

DR. H. W. DUDLEY, of Hillsboro, read an article on

ANIMAL LIGATURES

made from the "Texas mule-eared rabbit," as superior in finish and elasticity to any he had ever seen.

REPORTS.

DR. W. J. BURT, as Chairman of the Committee on Publication, reported the printing and distribution of four hundred copies of the *Transactions* for 1883; and, as Secretary of the Association, a prosperous condition of the same, and noting favorable mention from many correspondents and medical journals.

DR. J. LARENDON, Treasurer, reported a balance of $2165

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—Dr. H. C. Ghent, of Belton.

Vice-Presidents.—Drs. E. P. Becton, of Sulphur Springs; H. H. Darr, of Caldwell; and M. Matkin, of Hearne.

Secretary.—Dr. W. J. Burt, of Austin.

Treasurer.—Dr. J. Larendon, of Houston.

After which the Association adjourned, to meet in Houston, Texas, on the fourth Tuesday in April, 1885.

CORRESPONDENCE.

TUBERCULAR TUMORS OF THE LARYNX.

To the Editor of THE MEDICAL NEWS.

SIR: In THE London letter to the NEWS of May 17th (p. 597), is a description of the interesting case of tubercular tumors of the larynx, presented at the Clinical Society of London, by Dr. Percy Kidd, who is reported to have "searched literature in vain" for the record of a similar case.

The existence of well-defined, solitary tubercular tumors of the larynx and trachea, occurring independently of ulceration of the surrounding mucous membrane, and histologically distinct from the granular and papillomatous growths so frequently observed in the larynx of the phthisical, was first pointed out by your correspondent in a paper read before the Clinical Society of Maryland (*vide* abstract in *Maryland Medical Journal*, June 1, 1882), and published subsequently in the *Archives of Medicine*. (Tubercular Tumors of the Windpipe; Tuberculosis of the Laryngeal Muscles, etc., *Archives of Medicine*, October, 1882). Prior to that date, such neoplasms had not been described, nor had a case been recorded, the tubercular nature of which had been demonstrated by the microscope.

In the paper referred to, two cases were reported: a growth of the trachea, and a remarkable, diffuse nodular tumor covering the entire vestibule of the larynx, and ceasing abruptly at the free borders of the ventricular bands. Microscopical examination showed the growths to consist of a mass of clearly defined, closely aggregated miliary tubercular nodules, separated from each other by hyperplastic connective tissue, and representing all stages of degeneration. In some, caseation had so far advanced, that microscopic vomicæ were found. The growths seemed to have originated in the submucous tissue, and the nodules in the deeper portions were further advanced in caseation than those which were more superficial. In neither case was there any evidence of ulceration in the upper air-passages.

I am yours very respectfully,
JOHN N. MACKENZIE, M.D.

BALTIMORE, May 20, 1884.

NEWS ITEMS.

CINCINNATI.

(From our Special Correspondent.)

MEDICAL COLLEGE OF OHIO.—At a recent meeting of the Faculty of this Institution it was decided to hold a preliminary examination of all candidates for admission, excepting those who can furnish a diploma or other evidence of sufficient literary training. A course of lectures on hygiene was also arranged to be delivered by Dr. Frederic Kebler, now Lecturer on Pathology.

At a late meeting of the Board of Trustees of the College, the Hon. M. F. Foree, Judge of the Superior Court, was elected President of the Board, *vice* the Hon. Flamen Ball, who had tendered his resignation, after thirty-five years' service as a trustee, during twenty-three of which he was president. A banquet was given by the Faculty in his honor.

YELLOW FEVER.—There have been twelve deaths from yellow fever at Havana during the week ending May 17. Consular reports from Rio de Janeiro for the week ending March 29, show thirty-three deaths from yellow fever and four from pernicious fever. The consul says: "Though some deaths from yellow fever have occurred from amongst the shipping, the yellow fever has not become epidemic, and there is reason to hope that this port will, for this year at least, escape such a scourge." For the week ending April 5, there were forty deaths from yellow fever and nine from pernicious fever at Rio, and the consul says: "The weather during the week has been cool and pleasant, with frequent showers."

BOWDOIN MEDICAL ALUMNI ASSOCIATION.—The first annual meeting of this Association will be held in Memorial Hall, Brunswick, Wednesday, May 28, at 1 P.M. An address will be delivered by Dr. A. J. Fuller, of Bath, Class of 1841, and a banquet served. A large attendance is already assured.

All graduates of the School who have not received a special notice are requested to communicate at once with the Secretary, Dr. Chas. D. Smith, Portland, Maine.

THE STILLÉ DINNER.—In respect to the memory of the late Dr. Gross, the complimentary dinner to Prof. Stillé has been postponed to June 5.

MCGILL UNIVERSITY.—The annual commencement of this institution was held on March 29th. The degree of M.D. was conferred upon thirty-four graduates.

BISHOP'S COLLEGE.—At the annual convocation of the Faculty of Medicine of the University of Bishop's College, held on April 3d, the degree of C.M., M.D. was conferred upon ten graduates.

NOTES AND QUERIES.

CORRECTIONS.

To the Editor of THE MEDICAL NEWS.

SIR: In the summary of the Report on Vivisection in the May 17 number of THE MEDICAL NEWS, we are made to say that the Indian Government sent money to Philadelphia to carry on researches on serpent venoms. The facts will appear in the report, but I desire at once to correct a statement which would certainly excite comment in England.

Last year, at my request, Mr. Frelinghuysen, Secretary of State, addressed Her Majesty's Indian Government in regard to our researches on venoms. A sum of money was devoted to aid in collecting the poison of Indian serpents, and orders were issued to certain army physicians in regard to the matter. As a result, we have been able to continue the researches which at one time Lauder Brunton was successfully prosecuting, until the Vivisection Act in England put an end to his work.

Yours truly,
S. WEIR MITCHELL,
Chairman.

May 17, 1884.

To the Editor of THE MEDICAL NEWS.

SIR: In your report of the proceedings of the American Laryngological Association, published in THE MEDICAL NEWS of May 17, I am credited with the exhibition of new forms of the tonsillotome and uvulatome. Permit me to plead "Not guilty." The responsibility for these ingenious additions to the pharyngological armamentarium rests with my friend, Dr. Charles E. Sajous, of this city; in justice to whom I would request the insertion of this correction in the forthcoming issue of THE MEDICAL NEWS.

I am, Yours respectfully,
S. SOLIS COHEN.

1431 WALNUT STREET, PHILA., May 19, 1884.